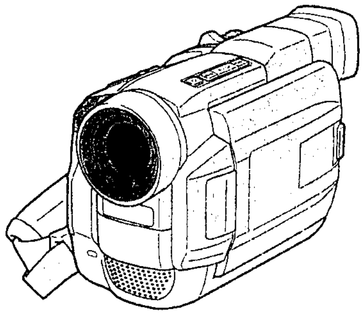
JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL505U/GR-DVL805U



Mini DV NTSC

DSC DIGITAL STILL CAMERA

SPECIFICATIONS

Camcorder

For General

Power supply	: DC 6.3 V ⎓ (Using AC Power Adapter/Charger) DC 7.2 V ⎓ (Using battery pack)
Power consumption	
LCD monitor off, viewfinder on	: Approx. 4.3 W
LCD monitor on, viewfinder off	: Approx. 5.3 W
Video light	: Approx. 3.5 W
Dimensions (W x H x D)	: 80 mm x 96 mm x 159 mm (3-3/16" x 3-13/16" x 6-5/16") (with the LCD monitor closed and the viewfinder pushed down)
Weight	: Approx. 580 g (1.3 lbs)
Operating temperature	: 0°C to 40°C (32°F to 104°F)
Operating humidity	: 35% to 80%
Storage temperature	: –20°C to 50°C (–4°F to 122°F)
Pickup	: 1/4" CCD
Lens	: F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter	: ø37 mm
LCD monitor	
GR-DVL805	: 3.5" diagonally measured, LCD panel/TFT active matrix system
GR-DVL505	: 3.0" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	
GR-DVL805	: Electronic viewfinder with 0.44" color LCD
GR-DVL505	: Electronic viewfinder with 0.24" black/white LCD
Speaker	: Monaural

For Digital Video Camera

Format	: DV format (SD mode)
Signal format	: NTSC standard
Recording/Playback format	: Video: Digital component recording : Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.

For Digital Still Camera

Storage media	: Built-in flash memory, 2 Mbyte
Compression system	: JPEG (compatible)
File size	: VGA: 640 x 480 pixels
Picture quality	: 2 modes (FINE/STANDARD)
Approximate number of storable images	
FINE	: 30
STANDARD	: 60

For Connectors

S	: Y : 1 V (p-p), 75 Ω, analog output C : 0.29 V (p-p), 75 Ω, analog output
AV	
Video output	: 1 V (p-p), 75 Ω, analog
Audio output	: 300 mV (rms), 1 kΩ, analog, stereo
DV	
Input/output	: 4-pin, IEEE 1394 compliant
PC (DIGITAL PHOTO)	
Digital still output	: ø2.5 mm, 3-pole
JLIP/EDIT	: ø3.5 mm, 4-pole

AC Power Adapter/Charger AA-V40U

Power requirement	
U.S.A. and Canada	: AC 120 V∼, 60 Hz
Other countries	: AC 110 V to 240 V∼, 50 Hz/60 Hz
Power consumption	: 23 W
Output	
Charge	: DC 7.2 V ⎓ , 1.2 A
VTR	: DC 6.3 V ⎓ , 1.8 A
Dimensions (W x H x D)	: 68 mm x 38 mm x 110 mm (2-11/16" x 1-1/2" x 4-3/8")
Weight	: Approx. 250 g (0.56 lbs)

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

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The following table lists the differing points between Models GR-DVL505U and GR-DVL805U in this series.

	GR-DVL505U	GR-DVL805U
VIEW FINDER	BLACK/WHITE	COLOR
LCD MONITOR	3.0"	3.5"

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: **Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.**

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

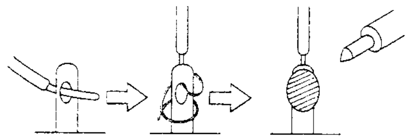


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

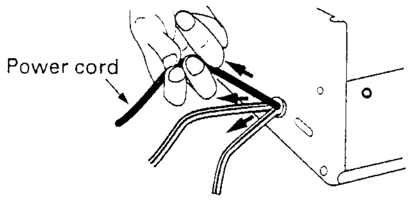


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

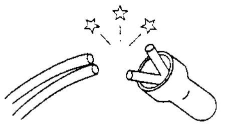


Fig.3

   (2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

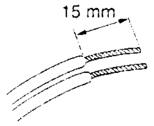


Fig.4

   (3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

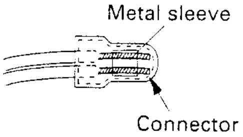


Fig.5

   (4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

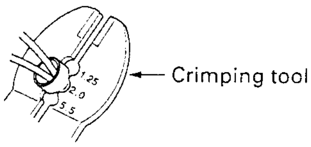


Fig.6

   (5) Check the four points noted in Fig.7.

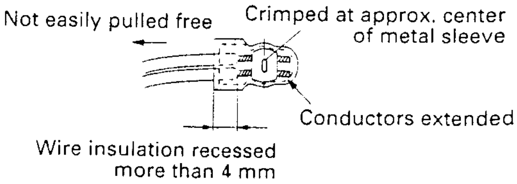

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

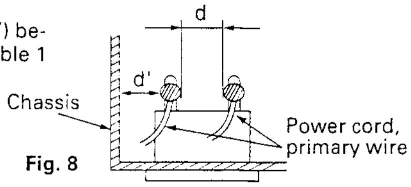


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method : (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

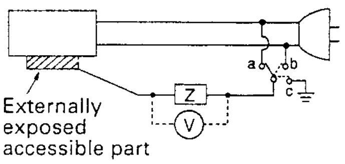


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

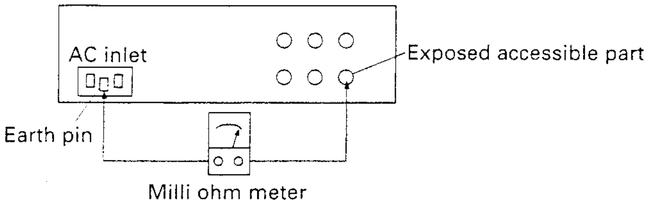


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class 2) AC 1.5 kV 1 minute (Class 1)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

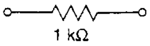
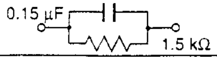
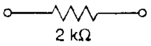
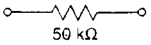
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	 1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		 50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INSTRUCTIONS

Dear Customer,

Thank you for purchasing this digital video camera. Before use, please read the safety information and precautions contained in the following pages to ensure safe use of this product.

Using This Instruction Manual

- All major sections and subsections are listed in the Table Of Contents on the cover page.
- Notes appear after most subsections. Be sure to read these as well.
- Basic and advanced features/operation are separated for easier reference.

It is recommended that you . . .

..... refer to the Index (☞ pgs. 69 – 75) and familiarize yourself with button locations, etc. before use.

..... read thoroughly the Safety Precautions and Safety Instructions that follow. They contain extremely important information regarding the safe use of this product.

You are recommended to carefully read the cautions on pages 77 through 79 before use.

SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The AA-V40U AC Power Adapter/Charger should be used with:
AC 120 V∼, 60 Hz in the USA and Canada,
AC 110 V – 240 V∼, 50 Hz/60 Hz in other countries.

CAUTION (applies to the AA-V40U)
TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION (s'applique à l'AA-V40U)
POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTES:

- *The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.*
- *The rating plate (serial number plate) of the AC Power Adapter/Charger is on its bottom.*

This camcorder is designed to be used with NTSC-type color television signals. It cannot be used for playback with a television of a different standard. However, live recording and LCD monitor/viewfinder playback are possible anywhere. Use the BN-V408U/V416U/V428U battery packs and, to recharge them, the provided multi-voltage AC Power Adapter/Charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

When the equipment is installed in a cabinet or on a shelf, make sure that is has sufficient space on all sides to allow for ventilation (10 cm (3-15/16") or more on both sides, on top and at the rear).

Do not block the ventilation holes.
(If the ventilation holes are blocked by a newspaper, or cloth etc., the heat may not be able to get out.)

No naked flame sources, such as lighted candles, should be placed on the apparatus.

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing.

Do not use this equipment in a bathroom or places with water.
Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups etc.) on top of this unit.
(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

IMPORTANT PRODUCT SAFETY INSTRUCTIONS

Electrical energy can perform many useful functions. But improper use can result in potential electrical shock or fire hazards. This product has been engineered and manufactured to assure your personal safety. In order not to defeat the built-in safeguards, observe the following basic rules for its installation, use and servicing.

ATTENTION:

Follow and obey all warnings and instructions marked on your product and its operating instructions. For your safety, please read all the safety and operating instructions before you operate this product and keep this manual for future reference.

INSTALLATION

1. Grounding or Polarization

(A) Your product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

(B) Your product may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature.
If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

2. Power Sources

Operate your product only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. If your product is intended to operate from battery power, or other sources, refer to the operating instructions.

3. Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

4. Power Cord Protection

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

5. Ventilation

Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.

- Do not block the openings by placing the product on a bed, sofa, rug or other similar surface.
- Do not place the product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

6. Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

ANTENNA INSTALLATION INSTRUCTIONS

1. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

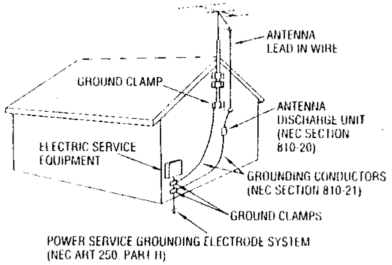
2. Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

3. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE, ANSI/NFPA 70


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

NEC – NATIONAL ELECTRICAL CODE

USE

1. Accessories

To avoid personal injury:

- Do not place this product on an unstable cart, stand, tripod, bracket or table. It may fall, causing serious injury to a child or adult, and serious damage to the product.
- Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product.
- Use a mounting accessory recommended by the manufacturer and follow the manufacturer's instructions for any mounting of the product.
- Do not try to roll a cart with small casters across thresholds or deep-pile carpets.

2. Product and Cart Combination

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

PORTABLE CART WARNING
(Symbol provided by RETAC)

3. Water and Moisture

Do not use this product near water—for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool and the like.

4. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

5. Attachments

Do not use attachments not recommended by the manufacturer of this product as they may cause hazards.

6. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

7. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

SERVICING

1. Servicing

If your product is not operating correctly or exhibits a marked change in performance and you are unable to restore normal operation by following the detailed procedure in its operating instructions, do not attempt to service it yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

2. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the product.
c. If the product has been exposed to rain or water.
d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
e. If the product has been dropped or damaged in any way.
f. When the product exhibits a distinct change in performance—this indicates a need for service.

3. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

4. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in safe operating condition.

SAFETY PRECAUTIONS

Do not point the lens or the viewfinder directly into the sun. This can cause eye injuries, as well as lead to the malfunctioning of internal circuitry. There is also a risk of fire or electric shock.

CAUTION!

The following notes concern possible physical damage to the camcorder and to the user.

When carrying, be sure to always securely attach and use the provided shoulder strap. Carrying or holding the camcorder by the viewfinder and/or the LCD monitor can result in dropping the unit, or in a malfunction.

Take care not to get your finger caught in the cassette holder cover. Do not let children operate the camcorder, as they are particularly susceptible to this type of injury.

Do not use a tripod on unsteady or unlevel surfaces. It could tip over, causing serious damage to the camcorder.

CAUTION!

Connecting cables (Audio/Video, S-Video, Editing, DC, etc.) to the camcorder and leaving the unit on top of the TV is not recommended, as tripping on the cables will cause the camcorder to fall, resulting in damage.

Mini DV NTSC

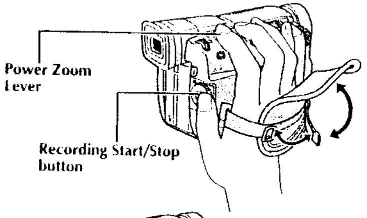
- This camcorder is designed exclusively for the digital video cassette. Only cassettes marked “MiniDV” can be used with this unit.

Before recording an important scene . . .

.... make sure you only use cassettes with the Mini DV mark MiniDV.

.... remember that this camcorder is not compatible with other digital video formats.

.... remember that this camcorder is intended for private consumer use only. Any commercial use without proper permission is prohibited. (Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.)

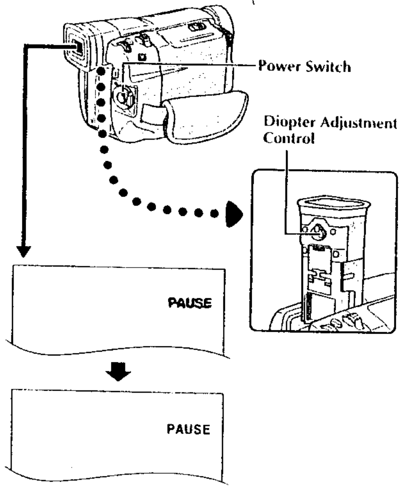


Grip Adjustment

1 Separate the Velcro strip.

2 Pass your right hand through the loop and grasp the grip.

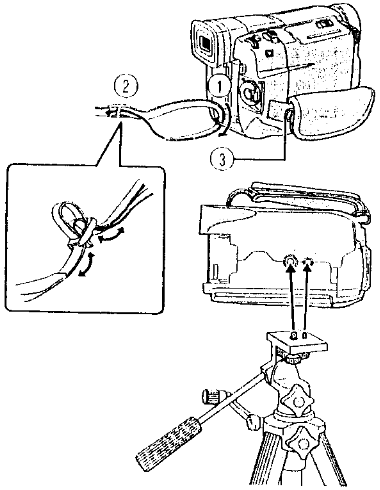
3 Adjust so that your thumb and fingers can easily operate the Recording Start/Stop Button and Power Zoom Lever. Refasten the Velcro strip.



Viewfinder Adjustment

1 Set the Power Switch to " 🅰 " or " Ⓜ " while pressing down the Lock Button located on the switch.

2 Turn the Diopter Adjustment Control until the indications in the viewfinder are clearly focused.



Shoulder Strap Attachment

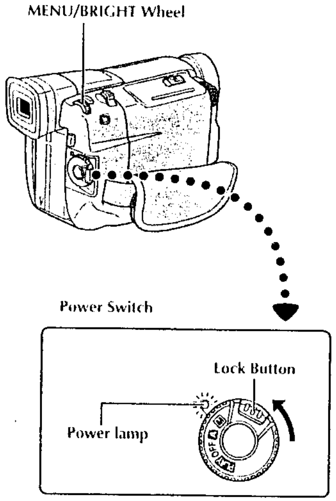
1 Make sure the battery pack or DC cord is removed. Following the illustration, thread the strap through the eyelet (1), then fold it back and thread it through the buckle (2). Repeat the procedure to attach the other end of the strap to the other eyelet (3) located under the Grip Strap, making sure the strap is not twisted.

Tripod Mounting

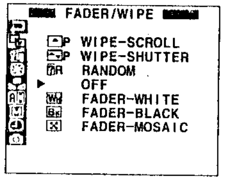
1 Align the screw and camera direction stud on the tripod with the camera's mounting socket and stud hole. Then tighten the screw.
- Some tripods are not equipped with studs.

CAUTION:

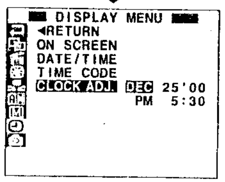
When using a tripod, be sure to open and extend its legs fully to stabilize the camcorder. To prevent damage to the unit caused by falling over, do not use a small-sized tripod.



Display



```
FADER/WIPE
P WIPE-SCROLL
P WIPE-SHUTTER
R RANDOM
▶ OFF
FADER-WHITE
FADER-BLACK
FADER-MOSAIC
```



```
DISPLAY MENU
◀RETURN
ON SCREEN
DATE/TIME
TIME CODE
CLOCK ADJ.  DEC 25'00
               PM  5:30
```

DISPLAY MENU

Date/Time Settings

The date/time is recorded onto the tape at all times, but its display can be turned on or off during playback (☞ pg. 34).

1 Set the Power Switch to " Ⓜ " while pressing down the Lock Button located on the switch. The power lamp lights and the camcorder is turned on.

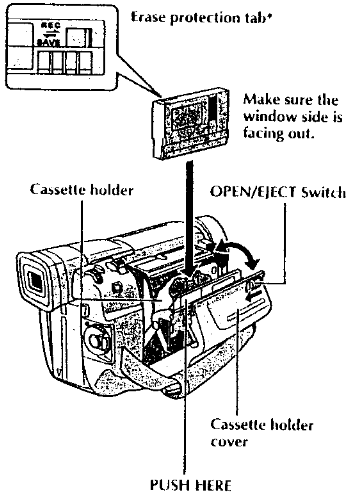
2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select " [⊙] ". Press it and "DISPLAY MENU" appears.

4 Rotate the **MENU/BRIGHT** wheel to select "CLOCK ADJ.". Press it and "month" is highlighted.
Rotate the **MENU/BRIGHT** wheel to input the month. Press it. Repeat to input the day, year, hour and minute.
Rotate the **MENU/BRIGHT** wheel to select "◀RETURN", and press it twice. The Menu Screen closes.

NOTE:

*Even if you select "CLOCK ADJ.", if the parameter is not highlighted the camcorder's internal clock continues to operate. Once you move the highlight bar to the first date/time parameter (month), the clock stops. When you finish setting the minute and press the **MENU/BRIGHT** wheel, the date and time begin operation from the date and time you just set.*



** To Protect Valuable Recordings . . .*

.... slide the erase protection tab on the back of the tape in the direction of "SAVE". This prevents the tape from being recorded over. To record on this tape, slide the tab back to "REC" before loading it.

Loading/Unloading A Cassette

The camcorder needs to be powered up to load or eject a cassette.

1 Slide and hold **OPEN/EJECT** in the direction of the arrow then pull the cassette holder cover open until it locks. The cassette holder opens automatically.
- Do not touch internal components.

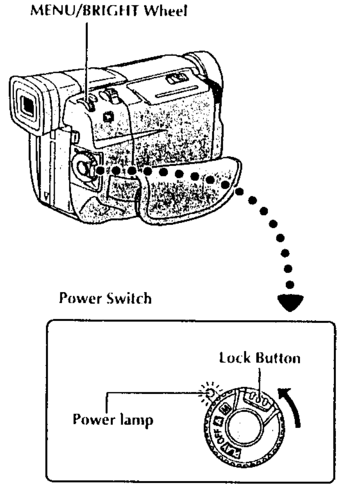
2 Insert or remove a tape and press "PUSH HERE" to close the cassette holder.
- Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.
- When the battery's charge is low, you may not be able to close the cassette holder cover. Do not apply force. Replace the battery with a fully charged one before continuing.

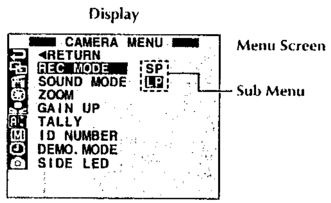
3 Close the cassette holder cover firmly until it locks into place.

Approximate recording time

Tape	Recording mode	
	SP	LP
30 min.	30 min.	45 min.
60 min.	60 min.	90 min.
80 min.	80 min.	120 min.

NOTES:
- *It takes a few seconds for the cassette holder to open. Do not apply force.*
- *If you wait a few seconds and the cassette holder does not open, close the cassette holder cover and try again. If the cassette holder still does not open, turn the camcorder off then on again.*
- *If the tape does not load properly, open the cassette holder cover fully and remove the cassette. A few minutes later, insert it again.*
- *When the camcorder is suddenly moved from a cold place to a warm environment, wait a short time before opening the cassette holder cover.*
- *Closing the cassette holder cover before the cassette holder comes out may cause damage to the camcorder.*
- *Even when the camcorder is switched off, a cassette can be loaded or unloaded. After the cassette holder is closed with the camcorder switched off, however, it may not recede. It is recommended to turn the power on before loading or unloading.*
- *When resuming recording, once you open the cassette holder cover a blank portion will be recorded on the tape or a previously recorded scene will be erased (recorded over) regardless of whether the cassette holder came out or not. See page 21 for information about recording from the middle of a tape.*
- *Loosen the Grip Strap if it appears to interfere with the cassette holder cover operation (☞ pg. 10).*





Recording Mode Setting

Set the tape recording mode depending on your preference.

1 Set the Power Switch to "Ⓜ" while pressing down the Lock Button located on the switch. The power lamp lights and the camcorder is turned on.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

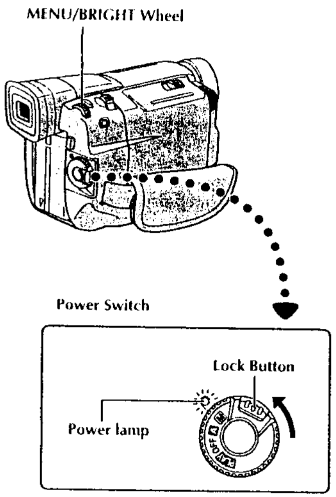
3 Rotate the **MENU/BRIGHT** wheel to select "Ⓐ" and press it. "CAMERA MENU" appears.

4 Rotate the **MENU/BRIGHT** wheel to select "REC MODE" and press it. The Sub Menu appears. Select "SP" or "LP" by rotating the **MENU/BRIGHT** wheel and press it. Rotate the **MENU/BRIGHT** wheel to select "◄RETURN", and press it twice. The Menu Screen closes.
- Audio Dubbing (☞ pg. 60) and Insert Editing (☞ pg. 61) are impossible on a tape recorded in the LP mode.
- "LP" (Long Play) is more economical, providing 1.5 times the recording time.

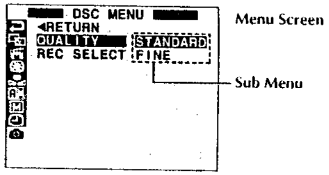
NOTES:
- *If the recording mode is switched during recording, the playback picture will be blurred at the switching point.*
- *It is recommended that tapes recorded in the LP mode on this camcorder be played back on this camcorder.*
- *During playback of a tape recorded on another camcorder, blocks of noise may appear or there may be momentary pauses in the sound.*

Picture Quality Mode Setting

The Picture Quality mode can be selected to best match your needs. Two Picture Quality modes are available: FINE and STANDARD (in order of quality).



Display



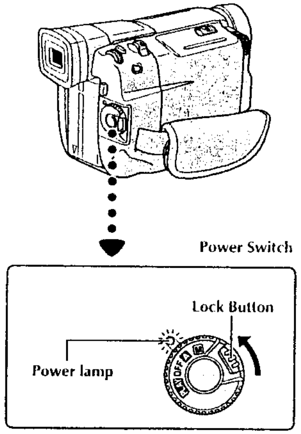
1. Set the Power Switch to "M" while pressing down the Lock Button located on the switch. The power lamp lights and the camcorder is turned on.
2. Press the **MENU/BRIGHT** wheel. The Menu Screen appears.
3. Rotate the **MENU/BRIGHT** wheel to select "📷" and press it. "DSC MENU" appears.
4. Rotate the **MENU/BRIGHT** wheel to select "QUALITY" and press it. The Sub Menu appears. Rotate the **MENU/BRIGHT** wheel to select the desired mode and press it. Rotate the **MENU/BRIGHT** wheel to select "◀RETURN", and press it twice. The Menu Screen closes.

Picture Quality Mode	Approximate Number of Storable Images
FINE	30
STANDARD	60

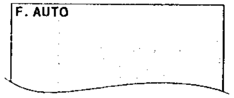
NOTES:
- *The number of storable images depends on the selected Picture Quality mode as well as the composition of the subjects in the images.*
- *The numbers listed above are applicable when the camcorder's memory is empty (when there are no sample images stored).*

Operation Mode

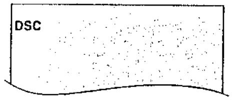
To turn on the camcorder, set the Power Switch to any operation mode except "OFF"while pressing down the Lock Button located on the switch.



When the Power Switch is set to "A", "F. AUTO" appears. When set to "M" or "PLAY", there is no indication.



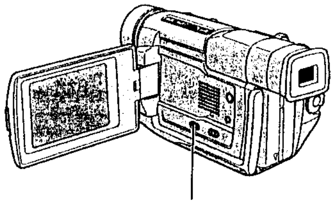
When the Power Switch is set to "A" or "M" and the VIDEO/DSC Switch is set to "DSC", "DSC" appears. When set to "VIDEO", there is no indication.



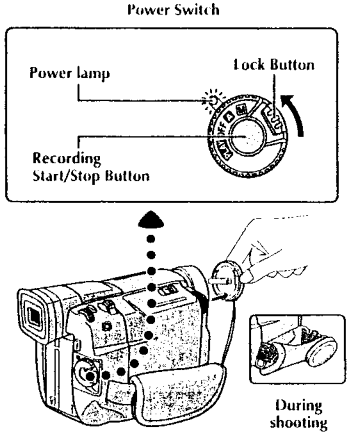
Choose the appropriate operation mode according to your preference using the Power Switch and **VIDEO/DSC** Switch.

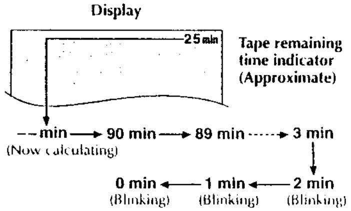
Power Switch Position
M (Manual): Allows you to set various recording functions using the Menus. If you want more creative capabilities than Full Auto recording, try this mode.
A (Full Auto): Allows you to record using NO special effects or manual adjustments. Suitable for standard recording.
OFF: Allows you to switch off the camcorder.
PLAY: Allows you to play back a recording on the tape, to display a still image stored in the camcorder's built-in memory or to transfer a still image recorded on the tape or in the camcorder's built-in memory to a computer.

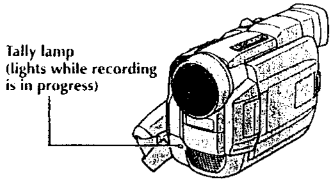
VIDEO/DSC Switch Position
VIDEO: Allows you to record on a tape or play back a tape. If "REC SELECT" is set to "TAPE/MEMORY" in the DSC Menu Screen, still images are also recorded in the camcorder's built-in memory.
DSC: Allows you to record a still image or display a still image stored in the camcorder's built-in memory.

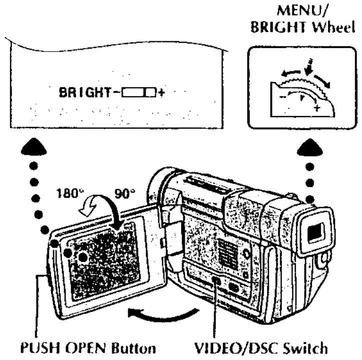


VIDEO/DSC Switch (Open the LCD monitor to access this switch.)




Display
25 min
Tape remaining time indicator (Approximate)
-- min → 90 min → 89 min → 3 min
(Now calculating)
0 min ← 1 min ← 2 min
(Blinking) (Blinking) (Blinking)





NOTE:

You should already have performed the procedures listed below. If not, do so before continuing.

- *Power (☞ pg. 8)*
- *Grip Adjustment (☞ pg. 10)*
- *Viewfinder Adjustment (☞ pg. 10)*
- *Load A Cassette (☞ pg. 12)*
- *Recording Mode Setting (☞ pg. 13)*

1 Press in the tabs on the lens cap to remove it. Press **PUSH OPEN**, open the LCD monitor and set the **VIDEO/DSC** Switch to "VIDEO".

2 Set the Power Switch to "🅰" or "Ⓜ" while pressing down the Lock Button located on the switch.

Shooting while using the LCD monitor: Make sure the LCD monitor is fully open. Tilt it upward/ downward for best viewability.

Shooting while using the viewfinder: Close the LCD monitor.

- The power lamp lights and the camcorder enters the Record-Standby mode. "PAUSE" is displayed.

3 Press the Recording Start/Stop Button. "REC ▶▶▶" appears while recording is in progress.

To Stop Recording . . .

.... press the Recording Start/Stop Button. The camcorder re-enters the Record-Standby mode.

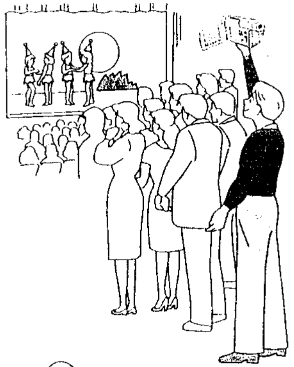
To Adjust The Brightness Of The Display

.... rotate the **MENU/BRIGHT** wheel until the bright level indicator on the display moves and the appropriate brightness is reached.

- If you are using the GR-DVL805, it is also possible to adjust the brightness of the viewfinder by closing the LCD monitor and adjusting as described above.

NOTES:

- *When you use the LCD monitor outdoors in direct sunlight, the LCD monitor may be difficult to see. If this happens, use the viewfinder instead.*
- *The image will not appear simultaneously in the LCD monitor and the viewfinder .*
- *The cassette holder cannot be opened unless a power supply is attached.*
- *There may be a delay after you open the cassette holder cover until the cassette holder opens. Do not use force.*
- *Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.*
- *The time required to calculate and display the remaining tape length, and the accuracy of the calculation, may vary according to the type of tape used.*
- *"TAPE END" appears when the tape reaches its end, and the power goes off automatically if left in this condition for 5 minutes. "TAPE END" also appears when a cassette at its end is loaded.*
- *If the Record-Standby mode continues for 5 minutes, the camcorder's power shuts off automatically. To turn the camcorder on again, set the Power Switch to "OFF", then back to "🅰" or "Ⓜ".*
- *When a blank portion is left between recorded scenes on the tape, the time code is interrupted and errors may occur when editing the tape. To avoid this, refer to "Recording from the middle of a tape" (☞ pg. 21).*
- *During recording, sound is not heard from the speaker.*
- ***To turn the tally lamp off during recording, ☞ pg. 24, 25.***
- ***To remove the indications from the camcorder's display during recording, ☞ pg. 24, 27.***

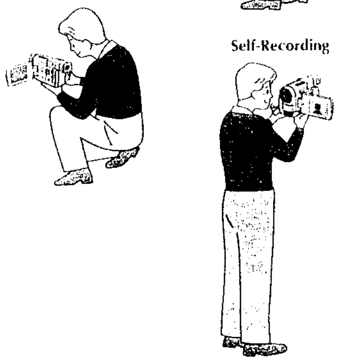


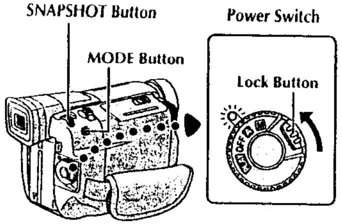
JOURNALISTIC SHOOTING

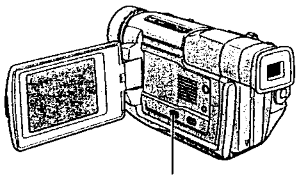
In some situations, different shooting angles may provide more dramatic results. Hold the camcorder in the desired position and tilt the LCD monitor in the most convenient direction. It can rotate 270° (90° downward, 180° upward).

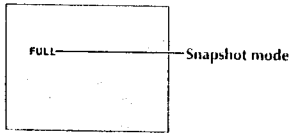
SELF-RECORDING

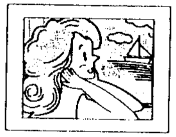
You can shoot yourself while viewing your own image in the LCD monitor. Open the LCD monitor and tilt it upward 180° so that it faces forward, then point the lens toward yourself and start recording.


Self-Recording

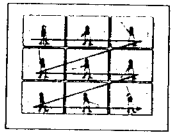



VIDEO/DSC Switch (Open the LCD monitor to access this switch.)

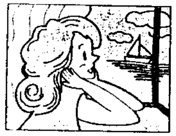




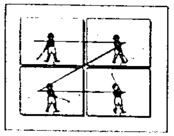
FRAME
Snapshot mode with frame*



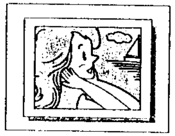
MULTI-9
Multi-Analyzer 9



FULL
Snapshot mode with no frame*



MULTI-4
Multi-Analyzer 4



PIN-UP
Pin-Up mode*

* There is the sound effect of a shutter closing.

Snapshot (For Video Recording)

This feature lets you record still images that look like photographs onto a tape.

SNAPSHOT MODE SELECTION

1. Set the **VIDEO/DSC** Switch to "VIDEO", then set the Power Switch to "🅐" or "Ⓜ" while pressing down the Lock Button located on the switch.
2. Choose the appropriate Snapshot mode from the 5 available by repeatedly pressing **MODE** until the desired snapshot mode indicator appears.

SNAPSHOT RECORDING

1. Press **SNAPSHOT**.

   If you press during Record-Standby . . .
   .... "PHOTO" appears and a still image will be recorded for approx. 6 seconds, then the camcorder re-enters the Record-Standby mode.

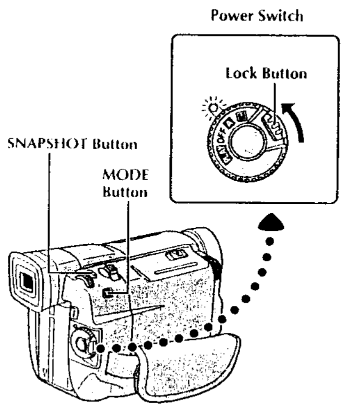
   If you press during Recording . . .
   .... "PHOTO" appears and a still image will be recorded for approx. 6 seconds, then the normal recording resumes.

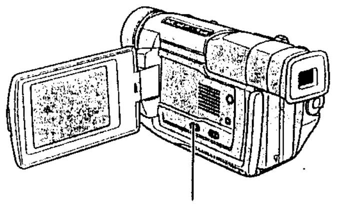
Motor Drive Mode

Keeping **SNAPSHOT** pressed provides an effect similar to serial photography. (Interval between still images: approx. 1 second)

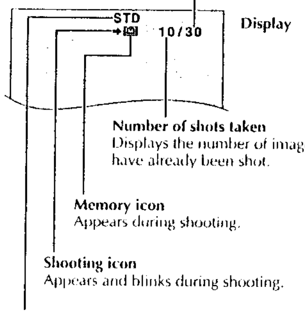
NOTES:

- *Even if "MULTI-4" or "MULTI-9" is engaged, Snapshot recording will be performed in the FULL mode during Digital Zoom.*
- *If Snapshot recording is not possible, "PHOTO" blinks when **SNAPSHOT** is pressed.*
- *If Program AE with special effects (☞ pg. 30) is engaged, certain modes of Program AE with special effects are disabled during Snapshot recording. In such a case, the icon blinks.*
- *If **SNAPSHOT** is pressed when "DIS" is set to "ON" (☞ pg. 26), the Stabilizer will be disabled.*
- *When "REC SELECT" is set to "➡ 📼/➡ Ⓜ" in the Menu Screen (☞ pg. 27), still images are recorded not only onto the tape but also in the camcorder's built-in memory. If **SNAPSHOT** is pressed when a tape is not loaded, still images will not be recorded in the memory.*
- *To dub images recorded on a tape to the camcorder's built-in memory, ☞ pg. 49.*
- *During tape playback as well, all snapshot modes are available when "📼 ➡ Ⓜ COPY" is set to "OFF" in the Menu Screen (☞ pg. 34). However, the shutter sound is not heard.*
- *During Snapshot recording, the image displayed in the viewfinder may be partially missing. However, there is no effect in the recorded image.*
- *When a cable is connected to the AV connector, the shutter sound is not heard from the speaker, however it is recorded onto the tape.*
- REC ▸▸▸ *will appear while the snapshot is being taken.*




VIDEO/DSC Switch (Open the LCD monitor to access this switch.)

Total number of shots
Displays the approximate total number of shots that can be stored, including those already taken. The number increases or decreases depending on the shots stored, the Picture Quality mode, etc.



Number of shots taken
Displays the number of images that have already been shot.

Memory icon
Appears during shooting.

Shooting icon
Appears and blinks during shooting.

Picture Quality mode
Displays the Picture Quality mode of the stored image. There are 2 modes available:
FINE and STD (Standard) (☞ pg. 14).

Basic Shooting (Snapshot)

You can use your camcorder as a Digital Still Camera for taking snapshots.

NOTE:

You should already have performed the procedures listed below. If not, do so before continuing.

- *Power (☞ pg. 8)*
- *Grip Adjustment (☞ pg. 10)*
- *Viewfinder Adjustment (☞ pg. 10)*
- *Picture Quality Mode Setting (☞ pg. 14)*

SNAPSHOT MODE SELECTION

1. Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "🅐" or "Ⓜ" while pressing down the Lock Button located on the switch.
2. Choose the appropriate Snapshot mode from the 5 available by repeatedly pressing **MODE** until the desired snapshot mode indicator appears.
   - The available Snapshot modes are the same as those on pg. 18.

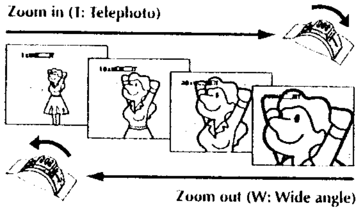
SNAPSHOT RECORDING

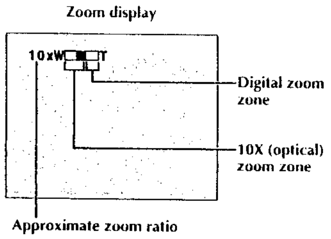
1. Press **SNAPSHOT**.
   The image is stored in the camcorder's built-in memory.

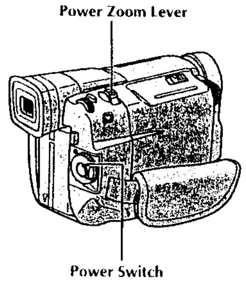
To Delete Unwanted Still Images . . .
.... when unwanted still images are stored in the camcorder's built-in memory or its memory is full, refer to "Deleting Images" (☞ pg. 40) and delete unwanted still images.

NOTES:

- *Even if "MULTI-4" or "MULTI-9" is engaged, Snapshot recording will be performed in the FULL mode during Digital Zoom.*
- *Even if "DIS" is set to "ON" (☞ pg. 26), the Stabilizer will be disabled.*
- *If Snapshot recording is not possible, "PHOTO" blinks when **SNAPSHOT** is pressed.*
- *The Motor Drive mode (☞ pg. 18) is disabled when the **VIDEO/DSC** Switch is set to "DSC".*
- *If Program AE with special effects (☞ pg. 30) is engaged, certain modes of Program AE with special effects are disabled during Snapshot recording. In such a case, the icon blinks.*
- *If shooting is not performed for approx. 5 minutes when the Power Switch is set to "🅐" or "Ⓜ" and power is supplied from the battery pack, the camcorder shuts off automatically to save power. To perform shooting again, set the Power Switch to "OFF", then to "🅐" or "Ⓜ".*
- *Some sample images have been stored in the built-in memory at the factory. If you wish to delete them, first remove the "Protect" function (☞ pg. 39), then perform the "Delete" function (☞ pg. 40).*


Zoom in (T: Telephoto)
Zoom out (W: Wide angle)


Zoom display
10xW T
Digital zoom zone
10X (optical) zoom zone
Approximate zoom ratio


Power Zoom Lever
Power Switch

FEATURE: Zooming

PURPOSE:

To produce the zoom in/out effect, or an instantaneous change in image magnification.

OPERATION:

Zoom In

Slide the Power Zoom Lever towards "T".

Zoom Out

Slide the Power Zoom Lever towards "W".

- The further you slide the Power Zoom Lever, the quicker the zoom action.

NOTES:

- *Focusing may become unstable during Zooming. In this case, set the zoom while in Record-Standby, lock the focus by using the manual focus (☞ pg. 23), then zoom in or out in Record mode.*
- *Zooming is possible to a maximum of 250X, or it can be switched to 10X magnification using the optical zoom (☞ pg. 25).*
- *Zoom magnification of over 10X is done through Digital image processing, and is therefore called Digital Zoom.*
- *During Digital zoom, the quality of image may suffer.*
- *Digital zoom cannot be used when digital image processing, such as Picture Wipe/Dissolve (☞ pg. 28, 29) or Video Echo (☞ pg. 30), is activated.*
- *Macro shooting (as close as approx. 5 cm (2") to the subject) is possible when the Power Zoom Lever is set all the way to "W". Also see "TELE MACRO" in the Menu Screen on page 26.*

NOTE: Recording From The Middle Of A Tape

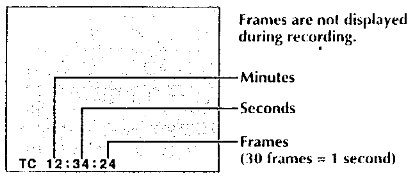
Time Code

During recording, a time code is recorded on the tape. This code is to confirm the location of the recorded scene on the tape during playback.
If recording starts from a blank portion, the time code begins counting from "00:00:00" (minute:second:frame). If recording starts from the end of a previously recorded scene, the time code continues from the last time code number.

To perform Random Assemble Editing (☞ pg. 54 – 59), time code is necessary. If during recording a blank portion is left partway through the tape, the time code is interrupted. When recording is resumed, the time code starts counting up again from "00:00:00". This means the camcorder may record the same time codes as those existing in a previously recorded scene. To prevent this, perform "Recording From The Middle of A Tape" below in the following cases;

- When shooting again after playing back a recorded tape.
- When power shuts off during shooting.
- When a tape is removed and re-inserted during shooting.
- When shooting using a partially recorded tape.
- When shooting on a blank portion located partway through the tape.
- When shooting again after shooting a scene then opening/closing the cassette holder cover.

Display


TC 12:34:24
Frames are not displayed during recording.
Minutes
Seconds
Frames
(30 frames = 1 second)

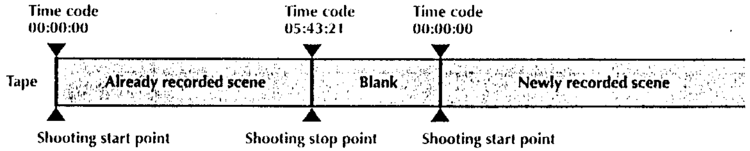
Recording From The Middle Of A Tape

1. Play back a tape to find the spot at which you want to start recording, then engage the Still Playback mode (☞ pg. 33).
2. Set the Power Switch to " A " or " M " while pressing down the Lock Button located on the switch, then start recording.

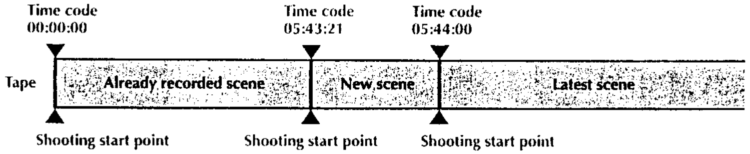
NOTES:

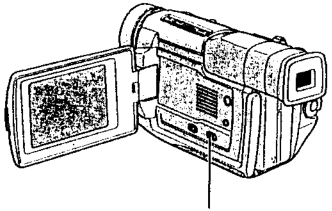
- *The time code cannot be reset.*
- *During fast-forwarding and rewinding, the time code indication does not move smoothly.*
- *The time code is displayed only when "TIME CODE" is set to "ON" (☞ pg. 27, 34).*

When a blank portion is recorded on a tape


Time code 00:00:00
Time code 05:43:21
Time code 00:00:00
Tape
Already recorded scene
Blank
Newly recorded scene
Shooting start point
Shooting stop point
Shooting start point

Proper recording


Time code 00:00:00
Time code 05:43:21
Time code 05:44:00
Tape
Already recorded scene
New scene
Latest scene
Shooting start point
Shooting start point
Shooting start point



LIGHT OFF/AUTO/ON Switch
(Open the LCD monitor to access this switch.)

DANGER

- The video light can become extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm (11-13/16") between the video light and people or objects.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

FEATURE: Video Light

PURPOSE:

To brighten the scene when natural lighting is too dim.

OPERATION:

Set **LIGHT OFF/AUTO/ON** as required:

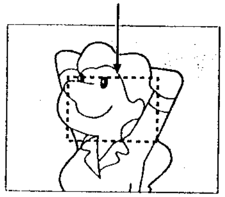
OFF : Turns off the light.
AUTO : Automatically turns on the light when the camcorder senses insufficient lighting on the subject.
ON : Always keeps the light on as long as the camcorder is turned on.

- The video light can only be used with the camcorder's power on.
- It is recommended to set the white balance (☞ pg. 32) to ☀ when you use the video light.
- When not using the video light, turn it off to save battery power.

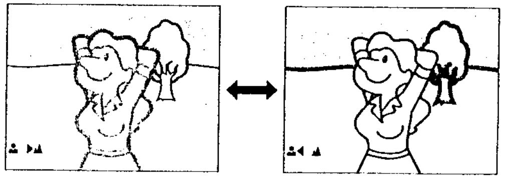
NOTES:

- *Even if the battery indicator (▭) does not blink due to low battery charge, the camcorder may turn off automatically when you turn on the video light, or when you start recording with the video light turned on.*
- *When **LIGHT OFF/AUTO/ON** is set to "AUTO":*
  - *Depending on the lighting conditions, the video light may keep turning on and off. In this case, manually switch the light on or off using **LIGHT OFF/AUTO/ON**.*
  - *While the "SHUTTER" mode (☞ pg. 30) is engaged, the light is likely to stay on.*
  - *While the "TWILIGHT" mode (☞ pg. 30) is engaged, the light will not activate.*

Focus detection zone



While focusing on a further subject **While focusing on a nearer subject**



FEATURE: Auto Focus

PURPOSE:

The camcorder's Full Range AF system offers continuous shooting ability from close-up (as close as approx. 5 cm (2") to the subject) to infinity.

However, correct focus may not be obtainable in the situations listed below (in these cases use manual focusing):

- When two subjects overlap in the same scene.
- When illumination is low.*
- When the subject has no contrast (difference in brightness and darkness), such as a flat, one-color wall, or a clear, blue sky.*
- When a dark object is barely visible in the viewfinder.*
- When the scene contains minute patterns or identical patterns that are regularly repeated.
- When the scene is affected by sunbeams or light reflecting off the surface of a body of water.
- When shooting a scene with a high-contrast background.

* The following low-contrast warnings appear blinking: ▲, ◀, ▶ and ▲

NOTES:

- *If the lens is smeared or blurred, accurate focusing is not possible. Keep the lens clean, wiping with a piece of soft cloth if it gets dirty. When condensation occurs, wipe with a soft cloth or wait for it to dry naturally.*
- *When shooting a subject close to the lens, zoom out first (☞ pg. 20). If zoomed-in in the auto focus mode, the camcorder may automatically zoom out depending on the distance between the camcorder and the subject. This will not occur when "TELE MACRO" (☞ pg. 26) is activated.*

FEATURE: Manual Focus

PURPOSE:

To obtain correct focus.

OPERATION:

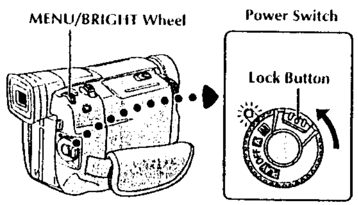
1) If you are using the viewfinder, you should already have made the necessary viewfinder adjustments (☞ pg. 10).
2) Set the Power Switch to "Ⓜ", then press **FOCUS** (▶▶). The manual focus indicator appears.
3) To focus on a farther subject, rotate the **MENU/BRIGHT** wheel towards "+". "▶" appears and blinks.
   To focus on a nearer subject, rotate the **MENU/BRIGHT** wheel towards "–". "◀" appears and blinks.
4) Press the **MENU/BRIGHT** wheel. Focus adjustment is complete.

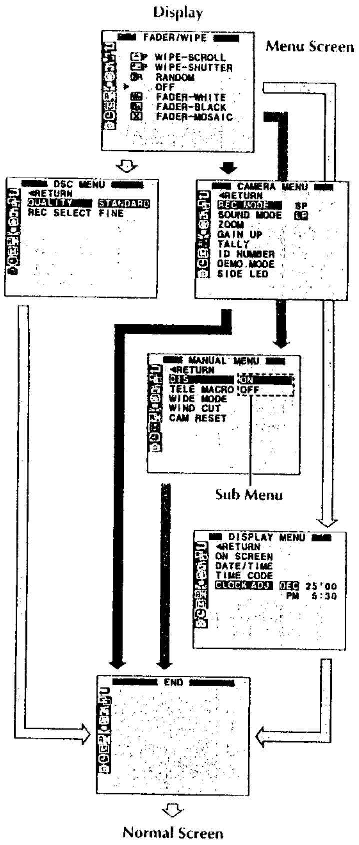
To reset to Auto Focus, press **FOCUS** (▶▶) twice or set the Power Switch to "Ⓐ".

If **FOCUS** (▶▶) is pressed once, the camcorder will enter the focus adjustment mode again.

NOTES:

- *Be sure to focus the lens in the maximum telephoto position when you use the Manual Focus mode. If you focus in on a subject in the wide-angle position, sharply focused images cannot be obtained when zoomed up because the depth-of-field is reduced at longer focal lengths.*
- *When the focus level cannot be adjusted any further or closer, "▲" or "▲" will blink.*


MENU/BRIGHT Wheel
Power Switch
Lock Button


Display
Menu Screen
FADER/WIPE
WIPE-SCROLL
WIPE-SHUTTER
RANDOM
OFF
FADER-WHITE
FADER-BLACK
FADER-MOSAIC
DSC MENU
◄RETURN
QUALITY STANDARD
REC SELECT FINE
CAMERA MENU
◄RETURN
REC MODE SP
SOUND MODE
ZOOM
GAIN UP
TALLY
ID NUMBER
DEMO.MODE
SIDE LED
MANUAL MENU
◄RETURN
DIS ON
TELE MACRO OFF
WIDE MODE
WIND CUT
CAM RESET
Sub Menu
DISPLAY MENU
◄RETURN
ON SCREEN
DATE/TIME
TIME CODE
CLOCK ADJ DEC 25'00
PM 5:30
END
Normal Screen

Using Menus For Detailed Adjustment

This camcorder is equipped with an easy-to-use, on-screen menu system that simplifies many of the more detailed camcorder settings (☞ pg. 25 – 27).

1 Set the Power Switch to "▣" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select the desired function icon, and press it. The selected function menu appears.

4 Function menu setting depends on the function.

If you have selected "▣", "▣", "▣" or "▣"...
.... see pg. 25.

If you have selected "▣", "▣", "▣" or "▣"...
.... go to step **5**.

5 Rotate the **MENU/BRIGHT** wheel to select the desired function and press it. The Sub Menu appears. Then, rotate the **MENU/BRIGHT** wheel to select the parameter, and press it. Selection is complete.

6 Rotate the **MENU/BRIGHT** wheel to select "◄RETURN" and press it twice. The Menu Screen closes.
- The ▣ icon represents "END".

Menu Screen Explanations

▣ FADER/WIPE			Refer to "Fade/Wipe Effects" (☞ pg. 28, 29).
▣ P.AE/EFFECT			Refer to "Program AE With Special Effects" (☞ pg. 30).
▣ EXPOSURE			Refer to "Exposure Control" and "Iris Lock" (☞ pg. 31).
▣ W.BALANCE			Refer to "White Balance Adjustment" and "Manual White Balance Operation" (☞ pg. 32).
▣ CAMERA MENU	**REC MODE**		Allows you to set the video recording mode (SP or LP) depending on your preference (☞ pg. 13).
	SOUND MODE	**12 BIT**	Enables video recording of stereo sound on four separate channels, and is recommended for use when performing audio dubbing (☞ pg. 60). (Equivalent to the 32 kHz mode of previous models)
		16 BIT	Enables video recording of stereo sound on two separate channels. (Equivalent to the 48 kHz mode of previous models)
	ZOOM	**10X**	When set to "10X" while using digital zoom, the zoom magnification will reset to 10X since digital zoom will be disengaged.
		40X	Allows you to use the Digital Zoom. By digitally processing and magnifying images, zooming is possible from 10X (the optical zoom limit), to a maximum of 40X digital magnification.
		250X	Allows you to use the Digital Zoom. By digitally processing and magnifying images,.zooming is possible from 10X (the optical zoom limit), to a maximum of 250X digital magnification.
	GAIN UP	**OFF**	Allows you to shoot dark scenes with no picture brightness adjustment.
		AGC	The overall appearance may be grainy, but the image is bright.
		AUTO **A☀**	The shutter speed is automatically adjusted (1/30 — 1/200 sec.). Shooting a subject in low or poor lighting at 1/30 sec. shutter speed provides a brighter image than in the AGC mode, but the subject's movements are not smooth or natural. The overall appearance may be grainy. When the shutter speed is automatically adjusted, "**A☀**" is displayed.
	TALLY	**ON**	The tally lamp comes on to signal the start of recording.
		OFF	The tally lamp remains off at all times.
	ID NUMBER		This number is necessary when connecting the camcorder to a device such as a computer using the J terminal (JLIP). The numbers range from 01 to 99. Factory setting is 06.

▨ : **Factory-preset**

NOTES:
- *The "▣ CAMERA MENU" settings are effective when the Power Switch is set to both "▣" and "▣".*
- *"REC MODE" can be set when the Power Switch is set to "▣" or "PLAY" (☞ pg. 13, 34).*

CONTINUED ON NEXT PAGE

Menu Screen Explanations (cont.)

CAMERA MENU	**DEMO. MODE**	**ON**	Demonstrates certain functions such as Program AE with special effects, etc., and can be used to confirm how these functions operate. When "DEMO. MODE" is set to "ON" and the Menu Screen is closed, demonstration starts. Performing any operation during the demonstration stops the demonstration temporarily. If no operation is performed for more than 1 minute after that, the demonstration will resume. **NOTES:** ● If a tape is in the camcorder, the demonstration cannot be turned on. ● "DEMO. MODE" remains "ON" even if the camcorder power is turned off. ● If "DEMO. MODE" remains "ON", some functions will not be available. After viewing demo, set to "OFF".
		OFF	Automatic demonstration will not take place.
	SIDE LED	**ON**	The Side LED indicator (☞ p. 74, 75) lights on the camcorder when the Power Switch is set to "A" or "M".
		OFF	
MANUAL MENU	**DIS**	**ON**	To compensate for unstable images caused by camera-shake, particularly at high magnification. **NOTES:** ● Accurate stabilization may not be possible if hand shake is excessive, or under the following conditions: • When shooting subjects with vertical or horizontal stripes. • When shooting dark or dim subjects. • When shooting subjects with excessive backlighting. • When shooting scenes with movement in various directions. • When shooting scenes with low-contrast backgrounds. ● Switch off this mode when recording with the camcorder on a tripod. ● The "✋" indicator blinks or goes out if the Stabilizer cannot be used.
		OFF	
	TELE MACRO	**ON**	Usually the distance to a subject where the lens is in focus depends on the zoom magnification. Unless there is a distance more than 1m (3.3 ft.) to the subject, the lens is out of focus at the maximum telephoto setting. When set to "ON", you can shoot a subject as large as possible at a distance of approx. 60 cm (2 ft.). • Depending on the zoom position, the lens may go out of focus.
		OFF	
	WIDE MODE	**OFF**	Records with no change in the screen ratio. For playback on a TV with a normal screen ratio.
		CINEMA	Inserts black bands at the top and bottom of the screen. During playback on wide-screen TVs, the black bands at the top and bottom of the screen are cut and the screen ratio becomes 16:9. ▭ appears. When using this mode, refer to your wide-screen TV's instruction manual. During playback/recording on 4:3 TVs/LCD monitor/viewfinder, black bands are inserted at the top and bottom of the screen and the image appears like a letterboxed 16:9 movie. • The "CINEMA" mode is effective only when the **VIDEO/DSC** Switch is set to "VIDEO".
		SQUEEZE	For playback on TVs with an aspect ratio of 16:9. Naturally expands the image to fit the screen without distortion. W appears. When using this mode, refer to your wide-screen TV's instruction manual. During playback/recording on 4:3 TVs/LCD monitor/viewfinder, the image is elongated vertically. • The "SQUEEZE" mode is effective only when the **VIDEO/DSC** Switch is set to "VIDEO".

▭ : **Factory-preset**

MANUAL MENU	**WIND CUT**	**ON**	Helps cut down on noise created by wind. "🌬" appears. The quality of the sound will change. This is normal.
		OFF	Disengages the function which cuts down on noise created by wind.
	CAM RESET	**CANCEL**	Does not reset all settings to the factory-preset.
		EXECUTE	Resets all settings to the factory-preset.
DISPLAY MENU	**ON SCREEN**	**LCD**	Keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV screen.
		LCD/TV	Makes the camcorder's display appear on screen when the camcorder is connected to a TV.
		SIMPLE	Keeps the indications (except the tape running indicator, warnings, date, time, time code, etc.) from appearing in the camcorder. Also keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV screen.
	DATE/ TIME	**ON**	The date/time is always displayed.
		OFF	The date/time does not appear.
	TIME CODE	**ON**	Time code is displayed on the camcorder and on the connected TV. Frame numbers are not displayed during recording.
		OFF	Time code is not displayed.
	CLOCK ADJ.		Allows you to set the current date and time (☞ pg. 11).
DSC MENU	**QUALITY**		Allows you to set the Picture Quality mode (FINE and STANDARD) depending on your preference (☞ pg. 14).
	REC SELECT	➔ ▭	When Snapshot recording is performed with the **VIDEO/DSC** Switch set to "VIDEO", still images are recorded only onto the tape.
		➔ ▭/ ➔ M	When Snapshot recording is performed with the **VIDEO/DSC** Switch set to "VIDEO", still images are recorded not only onto the tape but also in the camcorder's built-in memory.

▭ : **Factory-preset**

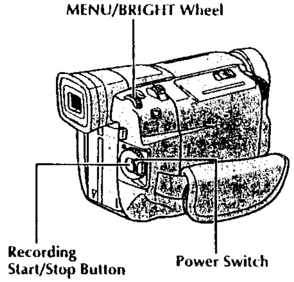
NOTES:

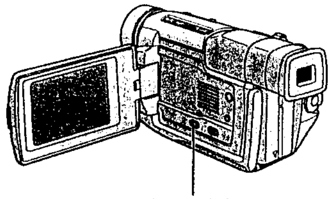
- *The "MANUAL MENU" settings are effective only when the Power Switch is set to "M".*
- *"DISPLAY MENU" functions which are set when the Power Switch is set to "M" are also applied when the Power Switch is set to "PLAY" (☞ pg. 34). "CLOCK ADJ." only appears when the Power Switch is set to "M".*
- *The "DISPLAY MENU" settings are effective even when the Power Switch is set to "A".*
- *The "ON SCREEN" setting can also be changed by pressing the **DISPLAY** Button on the remote control (provided) (☞ pg. 43, 46, 55).*

Fade/Wipe Effects

These effects let you make pro-style scene transitions. Use them to spice up the transition from one scene to the next. You can also vary transitions from scene to scene.

IMPORTANT:
Some Fade/Wipe Effects cannot be used with certain modes of Program AE with special effects (☞ pg. 30). If an unusable Fade/Wipe Effect is selected, its indicator blinks or goes out.




VIDEO/DSC Switch (Open the LCD monitor to access this switch)

To Deactivate The Selected Effect . . .
.... select "OFF" in step **4**.

NOTES:

- *You can extend the length of a Fade or Wipe by pressing and holding the Recording Start/Stop Button.*
- *If the power is turned off after a scene is finished recording, the stored point is erased, disabling the Picture Wipe/Dissolve combination. When this happens, the Picture Wipe/Dissolve indicator blinks. Also note that power shuts off automatically if 5 minutes elapse in the Record-Standby mode.*
- *The sound at the end of the last recorded scene is not stored.*

FADE/WIPE SELECTION (WH, BK, ⊠, BW, ◣, □, ◀, ◆, ▲, ⬍ and ?R)

Fade or Wipe works when video recording is started or when you stop recording.

1 Set the **VIDEO/DSC** Switch to "VIDEO", then set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "▣", then press it.

4 Rotate the **MENU/BRIGHT** wheel to select the desired function, then press it. Selection is complete.
- The FADER/WIPE Menu disappears and the effect is reserved. The indicator representing the selected effect appears.

5 Press the Recording Start/Stop Button to activate the Fade-in/out or Wipe-in/out.

PICTURE WIPE OR DISSOLVE SELECTION (▣P, ◣P, □P, ◀P, ◆P, ▲P and ⬍P)

The Picture Wipe or Dissolve works when video recording is started.

1 Follow steps **1** through **4** above.

2 ***If you select Picture Wipe/Dissolve during recording . . .***
.... press the Recording Start/Stop Button when one scene is finished. The point at which the scene ended is stored in memory.

If you select Picture Wipe/Dissolve during Record-Standby mode . . .
.... press the Recording Start/Stop Button to start recording and press it again when one scene is finished. The point at which the scene ended is stored in memory.

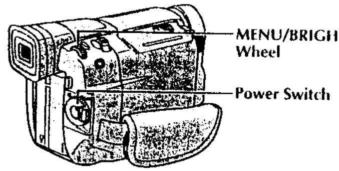
If you select Picture Wipe/Dissolve during Record-Standby mode after performing a Picture Wipe/Dissolve . . .
.... the point at which the scene ended is already stored in memory.

3 If you start recording a new scene within 5 minutes of the end of the previous recording (without having turned the camcorder's power off), the previous scene wipes out, revealing the new scene.

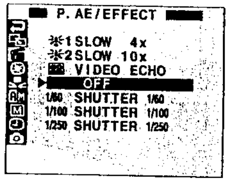
Fader And Wipe Menu

Menu	Effect
WH FADER — WHITE	Fade in or out with a white screen.
BK FADER — BLACK	Fade in or out with a black screen.
⊠ FADER — MOSAIC	Fade in or out with a full-screen mosaic effect.
BW FADER — B.W	Fade in to a color screen from a black and white screen, or fade out from color to black and white.
◣ WIPE — CORNER	Wipe in on a black screen from the upper right to the lower left corner, or wipe out from lower left to upper right, leaving a black screen.
□ WIPE — WINDOW	The scene starts in the center of a black screen and wipes in toward the corners, or comes in from the corners, gradually wiping out to the center.
◀ WIPE — SLIDE	Wipe in from right to left, or wipe out from left to right.
◆ WIPE — DOOR	Wipe in as the two halves of a black screen open to the left and right, revealing the scene, or wipe out and the black screen reappears from left and right to cover the scene.
▲ WIPE — SCROLL	The scene wipes in from the bottom to the top of a black screen, or wipes out from top to bottom, leaving a black screen.
⬍ WIPE — SHUTTER	Wipe in from the center of a black screen toward the top and bottom, or wipe out from the top and bottom toward the center leaving a black screen.
▣P DISSOLVE	The new scene gradually appears as the old one gradually disappears.
◣P WIPE — CORNER	The new scene wipes in over the previous one from the upper right corner to the lower left corner.
□P WIPE — WINDOW	The next scene gradually wipes in from the center of the screen toward the corners, covering the previous scene.
◀P WIPE — SLIDE	The next scene gradually wipes in over the previous one from right to left.
◆P WIPE — DOOR	The previous scene wipes out from the center to the right and left, like a door being pushed open to reveal the next scene.
▲P WIPE — SCROLL	The new scene wipes in over the last one from the bottom of the screen to the top.
⬍P WIPE — SHUTTER	The new scene wipes in over the previous one from the center toward the top and bottom of the screen.
?R RANDOM	When this function is activated, the camcorder randomly selects the effect used in scene transition (from BW, ⊠, WH, BK, □, ▲, ⬍, ◀, ◆, and ◣). The Picture Wipe/Dissolve function is not available.

IMPORTANT:
Some modes of Program AE with special effects cannot be used with certain Fade/Wipe Effects (☞ pg. 29). If an unusable mode is selected, its indicator blinks or goes out.



Display



Menu Screen

Program AE With Special Effects

1 Set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "FE", then press it.

4 Rotate the **MENU/BRIGHT** wheel to select the desired mode, then press it. Selection is complete.
- The P.AE/EFFECT Menu disappears and the selected mode is activated. The selected mode indicator appears.

To Deactivate The Selected Mode . . .
.... select "OFF" in step **4**.

NOTE:
Program AE with special effects can be changed during recording or during Record-Standby.

TWILIGHT
Makes evening scenes look more natural. White Balance (☞ pg. 32) is initially set to ☀, but can be changed to your desired setting. When Twilight is chosen, the camcorder automatically adjusts the focus from approx. 10 m (32 ft) to infinity. From less than 10 m (32 ft), adjust the focus manually.

SEPIA
Recorded scenes have a brownish tint like old photos. Combine this with the Cinema mode for a classic look.

B/W MONOTONE
Like classic black and white films, your footage is shot in B/W. Used together with the Cinema mode, it enhances the "classic film" effect.

CLASSIC FILM
Gives recorded scenes a strobe effect.

STROBE
Your recording looks like a series of consecutive snapshots.

VIDEO ECHO
Adds a "ghost" to the subject, giving your recording a "fantasy" feeling. Zoom magnification of over 10X is not available.

SLOW (Slow Shutter)
Lights dark subjects or areas even brighter than they would be under good natural lighting. Use "SLOW" only in dark areas.

1 SLOW 4X
The Shutter Speed is set to 1/15th of a second to quadruple the sensitivity.

2 SLOW 10X
The Shutter Speed is set to 1/6th of a second to provide 10 times the sensitivity.

NOTES:
- *When using "SLOW", the image takes on a strobe-like effect.*
- *If the manual focus indicator blinks when "SLOW" is used, adjust focus manually and use a tripod.*

SHUTTER (Variable Shutter Speed)
1/60–The shutter speed is fixed at 1/60th of a second. Black bands that usually appear when shooting a TV screen become narrower.
1/100–The shutter speed is fixed at 1/100th of a second. The flickering that occurs when shooting under a fluorescent light or mercury-vapor lamp is reduced.
1/250, 1/500 –These settings allow fast-moving images to be captured one frame at a time, for vivid, stable slow-motion playback. The faster the shutter speed, the darker the picture becomes. Use the shutter function under good lighting conditions.

Exposure Control

Manual exposure adjustment is recommended in the following situations:
- *When shooting using reverse lighting or when the background is too bright.*
- *When shooting on a reflective natural background such as at the beach or when skiing.*
- *When the background is overly dark or the subject light.*

1 Set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "EXP", then press it.

4 Rotate the **MENU/BRIGHT** wheel to select "MANUAL", then press it. The Menu Screen disappears. "EXP." and the highlight bar on the exposure control indicator are displayed.

5 Rotate the **MENU/BRIGHT** wheel towards "+" to brighten the image, or towards "–" to darken the image. (maximum ±6)

6 Press the **MENU/BRIGHT** wheel. Exposure adjustment is complete. The indication "EXP." and the highlight bar on the exposure control indicator go out.

To Return To Automatic Exposure Control . . .
.... select "AUTO" in step **4**. Or, set the Power Switch to "A".

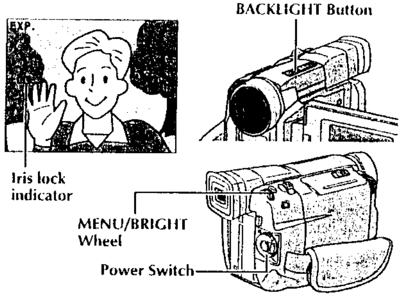
NOTE:
To Brighten The Subject Quickly . . .
.... press **BACKLIGHT**. ▨ is displayed and the subject is brightened. If pressed again, ▨ disappears and the brightness returns to the previous level.
- +3 exposure has the same effect as the **BACKLIGHT** Button.
- Using **BACKLIGHT** may cause the light around the subject to become too bright and the subject to become white.
- Backlight compensation is also available when the Power Switch is set to "A".
- Pressing the **BACKLIGHT** button has no effect when the exposure EXP is set to "MANUAL" and the Power Switch is set to "M".

Iris Lock

Use this function in the following situations:
- *When shooting a moving subject.*
- *When the distance to the subject changes (so its size in the LCD monitor or the viewfinder changes), such as when the subject is backing away.*
- *When shooting on a reflective natural background such as at the beach or when skiing.*
- *When shooting objects under a spotlight.*
- *When zooming.*

When the subject is close, keep the iris locked. Even when the subject moves away from you, the image will not darken or brighten.
Before the following steps, perform steps 1 through 4 of "Exposure Control".

5 Adjust zoom so that the subject fills the LCD monitor or the viewfinder, then press and hold the **MENU/BRIGHT** wheel for over 2 seconds. The exposure control indicator and "L" appear. Press the **MENU/BRIGHT** wheel. "L" changes to "L" and the iris is locked. "EXP." goes out.



To Return To Automatic Iris Control . . .
.... rotate the **MENU/BRIGHT** wheel to display "AUTO" then press it in step **4**. The exposure control indicator and "L" disappear. Or, set the Power Switch to "A".

To Lock The Exposure Control And The Iris . . .
.... after step **4**, adjust the exposure rotating the **MENU/BRIGHT** wheel. Then lock the iris in step **5**. For automatic locking, rotate the **MENU/BRIGHT** wheel to select "AUTO", then press it in step **4**. The iris becomes automatic after about 2 seconds.

Iris
Like the pupil of the human eye, it contracts in well-lit environments to keep too much light from entering, and dilates in dim environments to allow in more light.

White Balance Adjustment

A term that refers to the correctness of color reproduction under various lighting. If the white balance is correct, all other colors will be accurately reproduced.
The white balance is usually adjusted automatically. However, more advanced camcorder operators control this function manually to achieve a more professional color/tint reproduction.

1 Set the Power Switch to "M" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "▣", then press it. The Menu Screen disappears and "W.BAL" and the currently selected mode are displayed.

4 Rotate the **MENU/BRIGHT** wheel to select the desired mode.
"AUTO" – White balance is adjusted automatically (factory preset).
"▣ **MAN.**" – White balance is set manually.
"☀" – Outdoors on a sunny day.
"⛅" – Outdoors on a cloudy day.
"✺" – A video light or similar type of lighting is used.

5 Press the **MENU/BRIGHT** wheel. Selection is complete.

To Return To Automatic White Balance . . .
.... select "AUTO" in step **4**. Or, set the Power Switch to "A".

NOTE:
White balance cannot be used when Sepia or Monotone (☞ pg. 30) is activated.

Manual White Balance Operation

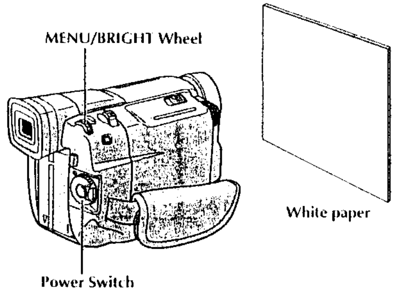
Perform Manual White Balance when shooting under various types of lighting.

1 Follow steps **1** through **4** of the white balance adjustment, and select "▣ MAN.".

2 Hold a sheet of plain white paper in front of the subject. Adjust zoom or position yourself so that the white paper fills the screen.

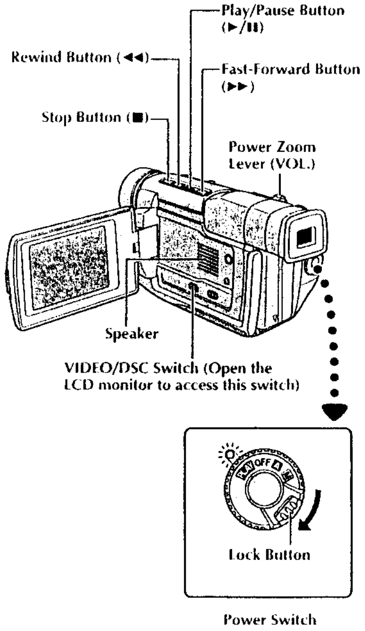
3 Press the **MENU/BRIGHT** wheel until ▣ begins blinking.
When the setting is completed, ▣ stops blinking.

4 Press the **MENU/BRIGHT** wheel. Only the Manual White Balance indicator ▣ is displayed.



To Change The Tint For Recording . . .
.... in step **2**, substitute colored paper for white. The white balance is adjusted based on the color, changing the tint. Red paper = deeper green; blue paper = orange; yellow paper = deeper purple.

NOTES:
- *In step 2, it may be difficult to focus on the white paper. In such a case, adjust focus manually (☞ pg. 23).*
- *A subject can be shot under various types of lighting conditions indoors (natural, flourescent, candlelight, etc.). Because the color temperature is different depending on the light source, the subject tint will differ depending on the white balance settings. Use this function for a more natural result.*
- *Once you adjust white balance manually, the setting is retained even if the power is turned off or the battery removed.*



1 Load a tape (☞ pg. 12).

2 Set the **VIDEO/DSC** Switch to "VIDEO", then set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch. To start playback, press **▶/❚❚**.
- To stop playback, press **■**.
- Press **◀◀** to rewind, or **▶▶** to fast-forward the tape during Stop mode.

To Control The Speaker Volume . . .
.... slide the Power Zoom Lever (**VOL.**) towards "+" to turn up the volume, or towards "–" to turn down the volume.

NOTES:
- *If Stop mode continues for 5 minutes when power is supplied from a battery, the camcorder shuts off automatically. To turn on again, set the Power Switch to "OFF", then to "PLAY".*
- *The playback picture can be viewed in the LCD monitor, viewfinder or on a connected TV (☞ pg. 42).*
- *You can also view the playback picture on the LCD monitor with it flipped over and pushed against the camera body.*
- *LCD monitor/viewfinder indications:*
  - *When power is supplied from a battery: the "▭" battery pack remaining power indicator is displayed. When power is supplied through the DC cord: "▭" does not appear.*
  - *During Stop mode, none of the indications are displayed.*
- *When a cable is connected to the AV connector, the sound is not heard from the speaker.*

Still Playback: Pauses during playback.
1) Press **▶/❚❚** during playback.
2) To resume normal playback, press **▶/❚❚** again.
- *If still playback continues for more than about 3 minutes, the camcorder's Stop mode is automatically engaged. After 5 minutes in the Stop mode, the camcorder's power is automatically turned off.*
- *When **▶/❚❚** is pressed, the image may not pause immediately while the camcorder stabilizes the still image.*

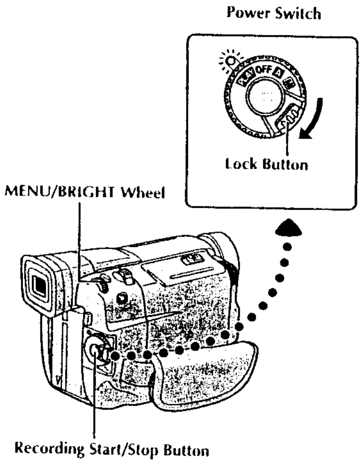
Shuttle Search: Allows high-speed search in either direction.
1) Press **▶▶** for forward or **◀◀** for reverse search during playback.
2) To resume normal playback, press **▶/❚❚**.
- *During playback, press and hold **◀◀** or **▶▶**. The search continues as long as you hold the button. Once you release it, normal playback resumes.*
- *A slight mosaic effect appears on screen during Shuttle Search. This is not a malfunction.*

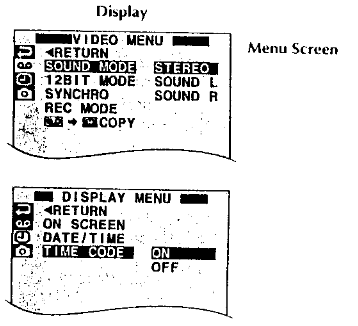
Frame-By-Frame Playback: Allows frame-by-frame search.
1) Engage Still Playback.
2) Rotate the **MENU/BRIGHT** wheel towards "+" for forward Frame-By-Frame Playback, or towards "–" for reverse Frame-By-Frame Playback during Still Playback.
- To resume normal playback, press **▶/❚❚**.
- *You can also use the provided remote control for Frame-By-Frame Playback (☞ pg. 52).*

Playback Zoom and Playback Special Effects
Available only with the remote control (provided) (☞ pg. 52, 53).

Using Menus For Detailed Adjustment

The following procedure applies to all except *Synchro Comp (☞ pg. 58, 59).*





1 Set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select the desired function icon, and press it. The selected function menu appears.

4 Rotate the **MENU/BRIGHT** wheel to select the desired function, and press it to display the Sub Menu.

5 Rotate the **MENU/BRIGHT** wheel to select the desired parameter and press it. Selection is complete.

6 Rotate the **MENU/BRIGHT** wheel to select "◀RETURN" and press it twice to close the Menu Screen.

VIDEO MENU	SOUND MODE	☞ pg. 35.
	12BIT MODE	☞ pg. 35.
	SYNCHRO	☞ pg. 59.
	REC MODE	Allows you to set the video recording mode (SP or LP) depending on your preference (☞ pg. 13). It is recommended you use "REC MODE" in the "VIDEO MENU" when using this camcorder as a recorder during digital dubbing (☞ pg. 47).
	➡ COPY	**ON**: Enables dubbing of images recorded on a tape to the camcorder's built-in memory (☞ pg. 49). **OFF**: Enables snapshots to be taken during video playback (☞ pg. 18).
DISPLAY MENU	ON SCREEN*	Makes the camcorder's indications appear/disappear from the connected TV screen.
	DATE/TIME*	Makes the date/time appear/disappear on the camcorder.
	TIME CODE*	Makes the time code appear/disappear on the camcorder.

* Each setting is linked with "DISPLAY MENU", which appears when the Power Switch is set to "M" (☞ pg. 27). The parameters are the same as in the description on pg. 27.

NOTES:

- *It is also possible to change the ON SCREEN settings by pressing **DISPLAY** on the remote control (provided).*
- *"REC MODE" can be set when the Power Switch is set to "PLAY" or "M" (☞ pg. 13, 25).*
- *If "ON SCREEN" is set to "SIMPLE", it keeps the camcorder's display (except the date, time and time code) from appearing on the connected TV. It also makes the playback sound mode and tape speed disappear on the camcorder.*

Playback Sound

During playback, the camcorder detects the sound mode in which the recording was made, and plays the sound back. Select the type of sound to accompany your playback picture. According to the menu access explanation on pg. 34, select "SOUND MODE" or "12BIT MODE" from the Menu Screen and set it to the desired parameter.

SOUND MODE	STEREO	Sound is output on both "L" and "R" channels in stereo.
	SOUND L	Sound from the "L" channel is output in stereo.
	SOUND R	Sound from the "R" channel is output in stereo.
12BIT MODE	SOUND 1	Original sound is output on both "L" and "R" channels in stereo.
	SOUND 2	Dubbed sound is output on both "L" and "R" channels in stereo.
	MIX	Original and dubbed sounds are combined and output in stereo on both "L" and "R" channels in stereo.

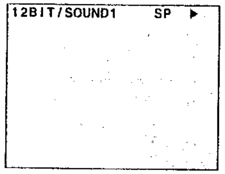
☐ : Factory-preset

NOTES:

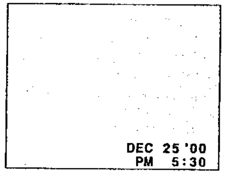
- *The "SOUND MODE" setting is available for both 12-bit and 16-bit sound. (In previous models' functions, "12-bit" is called "32 kHz" and "16-bit" is called "48 kHz".)*
- *The camcorder cannot detect the sound mode in which the recording was made during fast forward or rewind. During playback the sound mode is displayed in the upper left corner.*

Display

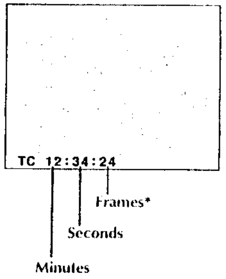
ON SCREEN setting:
For playback sound, tape speed and tape running.



DATE/TIME setting:
For date/time.



TIME CODE setting:
For time code.



*30 frames = 1 second

Normal Playback

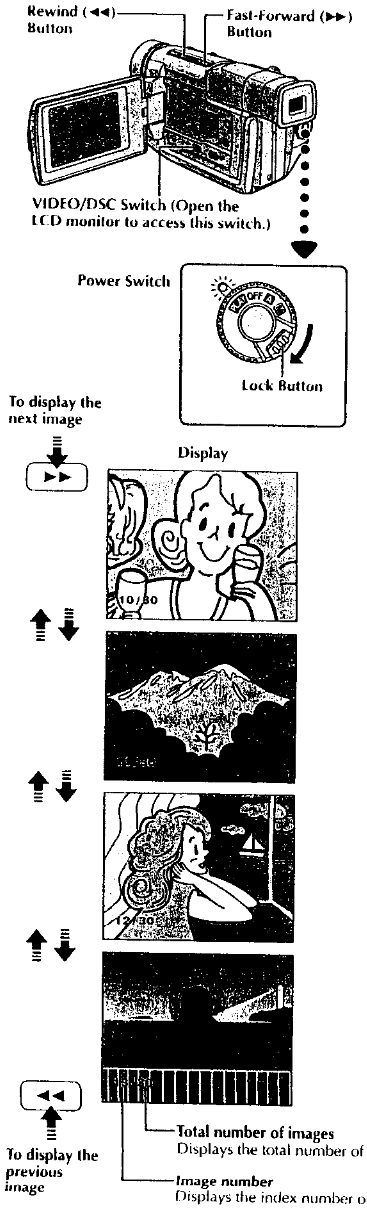
Images shot with the camcorder are automatically numbered, then stored in numerical order in the camcorder's built-in memory. You can view the stored images, one at a time, much like flipping through a photo album.

1 Set the **VIDEO/DSC** Switch to " DSC ", then set the Power Switch to " PLAY " while pressing down the Lock Button.
- A stored image is displayed.

2 Press ►► to display the next image.
Press ◄◄ to display the previous image.

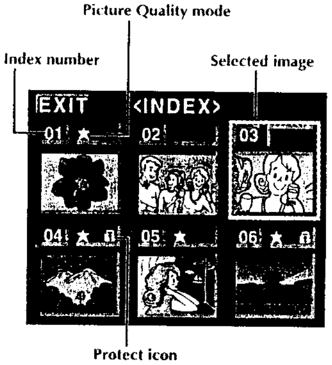
NOTE:

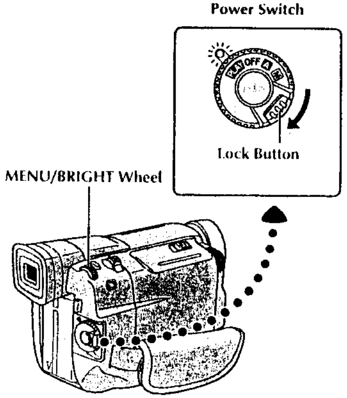
Even if you shoot a new image after playing back a low-numbered one, this will not overwrite an existing image, because new images are automatically stored after the last-recorded one.

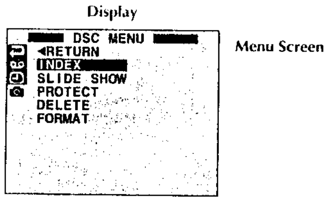

Rewind (◄◄) Button
Fast-Forward (►►) Button
VIDEO/DSC Switch (Open the LCD monitor to access this switch.)
Power Switch
OFF
Lock Button
To display the next image
Display
10/30
12/30
To display the previous image

Total number of images
Displays the total number of stored images.

Image number
Displays the index number of the image file (☞ pg. 37).


Picture Quality mode
Index number
Selected image
EXIT
<INDEX>
01
02
03
04
05
06
Protect icon


Power Switch
OFF
Lock Button
MENU/BRIGHT Wheel


Display
DSC MENU
◄RETURN
INDEX
SLIDE SHOW
PROTECT
DELETE
FORMAT
Menu Screen

Playback Screen

INDEX Screen

The images you shot can be displayed together with their index information. Convenient for checking images shot beforehand, the INDEX Screen also shows the Picture Quality mode as well as which images are protected against accidental erasure.

01: Index number

Index numbers are marked from 01. For example, when 10 images are stored (index number: 01 to 10), if three images with index numbers 02, 04 and 06 are deleted from memory, the remaining images are automatically moved up to fill any gaps in the numerical sequence. Therefore, the number of remaining images is 7, and the new index numbers range from 01 to 07.

★ : Picture Quality mode

Displays the Picture Quality mode of the stored image. There are 2 modes available: FINE and STANDARD (☞ pg. 14). A star mark is displayed next to still images shot in the FINE mode. There are no marks next to still images shot in the STANDARD mode.

🔒: Protect icon

When an image is protected against its accidental erasure, a padlock mark appears next to the Picture Quality mode indicator, and that image cannot be deleted.

Selected Image

An image is framed in green like this when it is selected. Rotate **MENU/BRIGHT** to move the green frame to the desired image.

Index Playback

You can view the images stored in memory six at a time. Use this mode when looking for an image you wish to view.

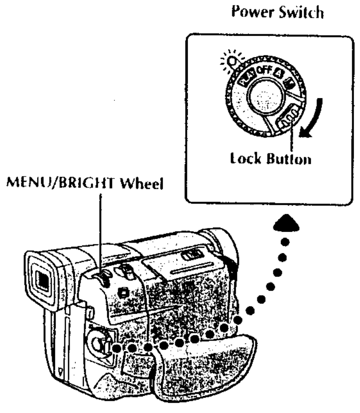
1 Perform step **1** of "Normal Playback" on pg. 36.

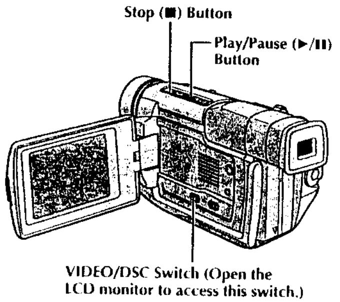
2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select " 📷 " and press it. "DSC MENU" appears.

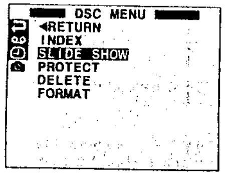
4 Rotate the **MENU/BRIGHT** wheel to select "INDEX" and press it. The INDEX Screen appears.

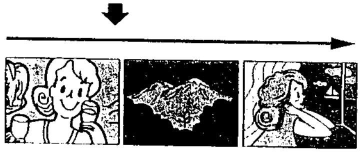
5 Rotate the **MENU/BRIGHT** wheel to move the green frame to the desired image and press it. The selected image is displayed on the whole screen, then the screen enters normal playback.


Power Switch
Lock Button
MENU/BRIGHT Wheel


Stop (■) Button
Play/Pause (►/II) Button
VIDEO/DSC Switch (Open the LCD monitor to access this switch.)

Display


DSC MENU
◄RETURN
INDEX
SLIDE SHOW
PROTECT
DELETE
FORMAT



Slide Show

You can run through all the images stored in memory automatically in numerical order.

1 Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "PLAY", while pressing down the Lock Button.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

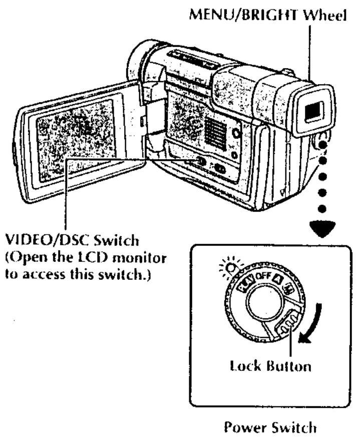
3 Rotate the **MENU/BRIGHT** wheel to select "📷" and press it. "DSC MENU" appears.

4 Rotate the **MENU/BRIGHT** wheel to select "SLIDE SHOW" and press it. The Slide Show starts.

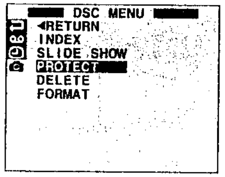
5 To stop the Slide Show, press ■.

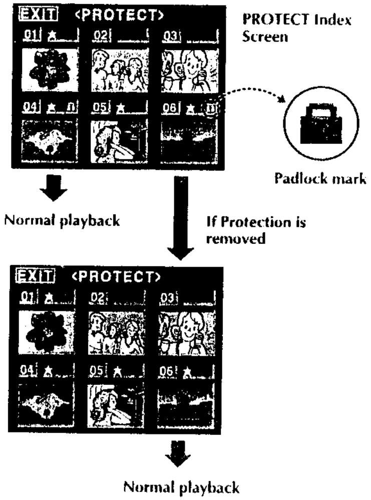
To start the Slide Show without going through the Menu Screen . . .

.... after step **1**, press ►/**II**. To stop the Slide Show, press ■.


MENU/BRIGHT Wheel
VIDEO/DSC Switch (Open the LCD monitor to access this switch.)
Lock Button
Power Switch

Display


DSC MENU
◄RETURN
INDEX
SLIDE SHOW
PROTECT
DELETE
FORMAT
Menu Screen


EXIT <PROTECT>
01
02
03
04
05
06
PROTECT Index Screen
Padlock mark
Normal playback
If Protection is removed
EXIT <PROTECT>
01
02
03
04
05
06
Normal playback

Protecting Images

The Protect mode helps prevent the accidental erasure of images. When a padlock mark is displayed next to the Picture Quality Mode indication, that image cannot be deleted.

1 Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "PLAY" while pressing down the Lock Button.
- A stored image is displayed.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears. Rotate it to select "📷" and press it. "DSC MENU" appears.

3 Rotate the **MENU/BRIGHT** wheel to select "PROTECT" and press it. The PROTECT Index Screen appears.

TO PROTECT AN IMAGE

Before doing the following, perform steps **1** through **3** above.

4 Rotate the **MENU/BRIGHT** wheel to move the green frame to the desired image and press it. A "🔒" padlock mark appears on the selected image.
Repeat this procedure for all images you do not wish to delete by accident.

5 Rotate the **MENU/BRIGHT** wheel upward to select "EXIT" and press it. The normal playback screen appears.

NOTE:

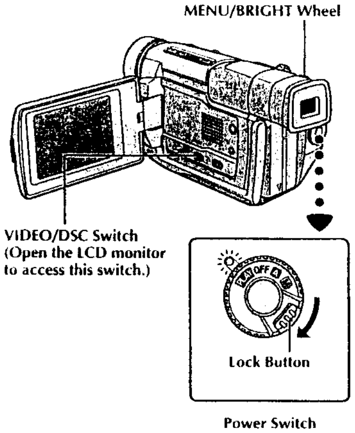
When the memory is initialized or corrupted, even protected images are deleted. If you do not want to lose important images, transfer them to a PC and save them.

TO REMOVE PROTECTION

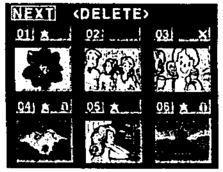
Before doing the following, perform steps **1** through **3** above.

4 Rotate the **MENU/BRIGHT** wheel to move the green frame to the desired image and press it. The "🔒" padlock mark located above the image disappears and the image is no longer protected.
Repeat this procedure for all images from which you wish to remove protection.

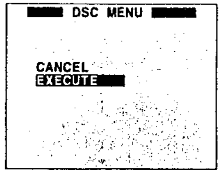
5 Rotate the **MENU/BRIGHT** wheel upward to select "EXIT" and press it. The normal playback screen appears.



Display



DELETE Index Screen



Deletion Confirmation Screen

Deleting Images

Previously shot images can be deleted either one at a time or all at once.

1 Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "PLAY" while pressing down the Lock Button.
- A stored image is displayed.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears. Rotate it to select "📷" and press it. "DSC MENU" appears.

3 Rotate the **MENU/BRIGHT** wheel to select "DELETE" and press it. The Sub Menu appears.

TO SELECT AN IMAGE BY BROWSING IMAGES STORED IN MEMORY

Before doing the following, perform steps **1** through **3** above.

4 Rotate the **MENU/BRIGHT** wheel to select "SEL FCT" and press it. The DELETE Index Screen appears.

5 Rotate the **MENU/BRIGHT** wheel to move the green frame to the desired image that you wish to delete and press it. An " X " appears above the selected image. Repeat this procedure for all images that you wish to delete.
To deselect an image, press the **MENU/BRIGHT** wheel again. The " X " disappears.

6 Rotate the **MENU/BRIGHT** wheel upward to select "NEXT" and press it. The Deletion Confirmation Screen appears.

7 Rotate the **MENU/BRIGHT** wheel to select "EXECUTE" and press it. "DELETING IN PROGRESS" appears. The selected images are deleted and the normal playback screen appears.
- To cancel deletion, rotate the **MENU/BRIGHT** wheel to select "CANCEL" and press it.

TO DELETE ALL IMAGES

Before doing the following, perform steps **1** through **3** above.

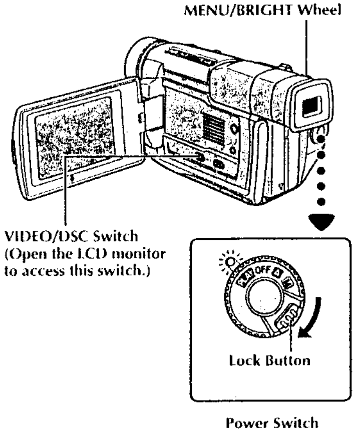
4 Rotate the **MENU/BRIGHT** wheel to select "ALL" and press it. The Deletion Confirmation Screen appears.

5 Rotate the **MENU/BRIGHT** wheel to select "EXECUTE" and press it. "DELETING IN PROGRESS" appears. All the images are deleted and the normal playback screen appears.
- To cancel deletion, rotate the **MENU/BRIGHT** wheel to select "CANCEL" and press it.

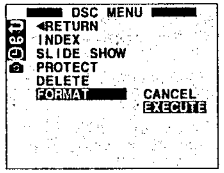
NOTES:
- *Protected images (☞ pg. 39) cannot be deleted with the above operation. To delete them, remove protection first.*
- *Once images are deleted, they cannot be restored. Check images before deleting.*

CAUTION:

Do not perform any other operation (such as turning off the camcorder) during deletion. Also, be sure to use the provided AC Power Adapter/Charger, as the memory may be corrupted if the battery becomes exhausted during deletion. If the memory becomes corrupted initialize it. (☞ pg. 41)



Display



Menu Screen

Initializing The Built-in Memory

You can initialize the camcorder's built-in memory anytime.
After initializing, all images stored in the memory, including those which have been protected, are cleared.

1 Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "PLAY", while pressing down the Lock Button located on the switch.

2 Press the **MENU/BRIGHT** wheel. The Menu Screen appears.

3 Rotate the **MENU/BRIGHT** wheel to select "📷" and press it. "DSC MENU" appears.

4 Rotate the **MENU/BRIGHT** wheel to select "FORMAT" and press it. The Sub Menu appears.

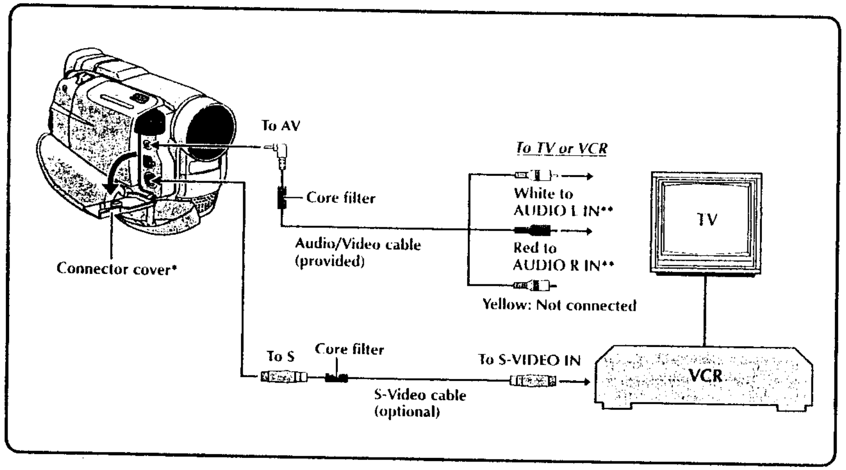
5 Rotate the **MENU/BRIGHT** wheel to select "EXECUTE" and press it. "FORMATTING IN PROGRESS" appears and the built-in memory is initialized. When initialization is finished, "NO IMAGES STORED" appears.
- To cancel initialization, rotate the **MENU/BRIGHT** wheel to select "CANCEL" and press it.

CAUTION:

Do not perform any other operation (such as turning off the camcorder) during initialization. Also, be sure to use the provided AC Power Adapter/Charger, as the memory may be corrupted if the battery becomes exhausted during initialization. If the memory becomes corrupted initialize it again.

These are some basic types of connections. When making the connections, refer also to your VCR and TV instruction manuals.

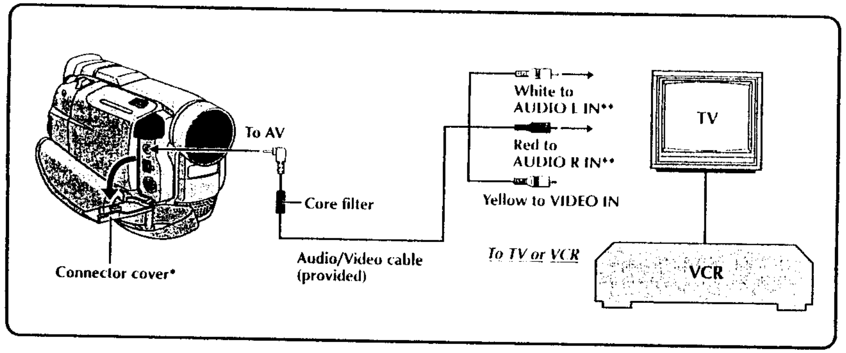
A. Connection to a TV or VCR equipped with an S-VIDEO IN and A/V input connectors


To AV
Core filter
Audio/Video cable (provided)
Connector cover*
To TV or VCR
White to AUDIO L IN**
Red to AUDIO R IN**
Yellow: Not connected
TV
To S
Core filter
S-Video cable (optional)
To S-VIDEO IN
VCR

* When connecting the cables, open this cover.

** The Audio cable is not required for watching still images when the **VIDEO/DSC** Switch is set to "DSC".

B. Connection to a TV or VCR equipped only with A/V input connectors


To AV
Core filter
Audio/Video cable (provided)
Connector cover*
White to AUDIO L IN**
Red to AUDIO R IN**
Yellow to VIDEO IN
To TV or VCR
TV
VCR

* When connecting the cables, open this cover.

** The Audio cable is not required for watching still images when the **VIDEO/DSC** Switch is set to "DSC".

1 Make sure all units are turned off.

2 Connect the camcorder to a TV or VCR as shown in the illustration (☞ pg. 42).
If using a VCR . . . go to step 3.
If not . . . go to step 4.

3 Connect the VCR output to the TV input, referring to your VCR's instruction manual.

4 Turn on the camcorder, the VCR and the TV.

5 Set the VCR to its AUX input mode, and set the TV to its VIDEO mode.

To choose whether or not the following displays appear on the connected TV . . .

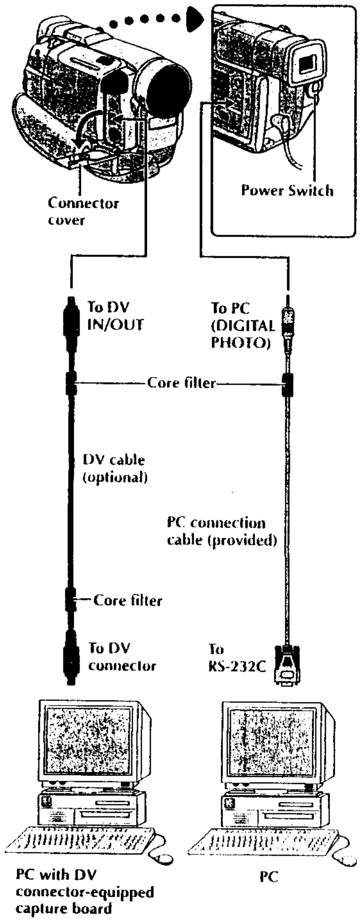
- Date/Time
  .... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Time Code
  .... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Playback Sound Mode, Tape Speed And Tape Running Displays for video playback

  OR

  Image Number/Total Number of Images for D.S.C. Playback
  .... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 34). Or, press **DISPLAY** on the remote control (provided).

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- ***Use the provided Audio/Video cable, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- ***The S-Video cable is optional. Be sure to use the YTU94146A S-Video cable.***
  Consult the JVC Service Center described on the sheet included in the package for details on its availability. Make sure to connect the end with a core filter to the camcorder. The core filter reduces interference.
- *To monitor the picture and sound from the camcorder without inserting a tape, set the camcorder's Power Switch to "A" or "M", then set your TV to the appropriate input mode.*
- *Make sure you adjust the TV sound volume to its minimum level to avoid a sudden burst of sound when the camcorder is turned on.*
- *If you have a TV or speakers that are not specially shielded, do not place the speakers adjacent to the TV as interference will occur in the camcorder playback picture.*


Connector cover
Power Switch
To DV IN/OUT
To PC (DIGITAL PHOTO)
Core filter
DV cable (optional)
PC connection cable (provided)
Core filter
To DV connector
To RS-232C
PC with DV connector-equipped capture board
PC

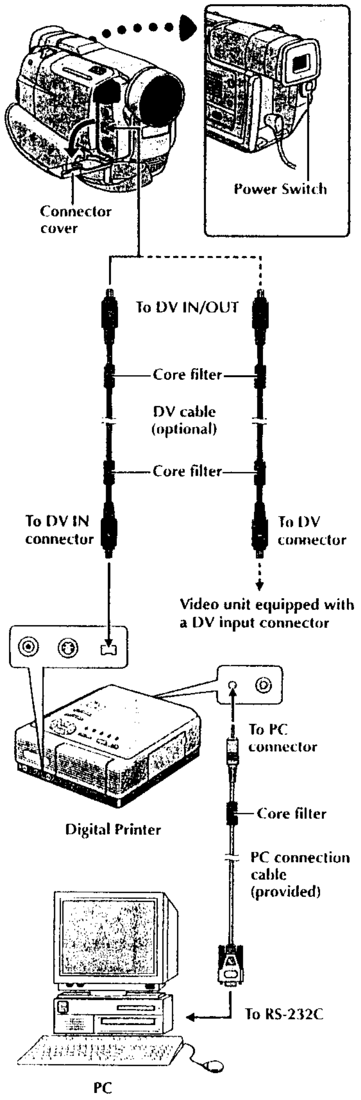
Connection To A Personal Computer

This camcorder can transfer still images to a PC by using the provided software when connected as shown in the illustration. It is also possible to transfer still images to a PC with a DV connector-equipped capture board installed.

1. Make sure the camcorder and PC are turned off.
2. Connect the camcorder to your PC using the appropriate cable as shown in the illustration.
3. Turn the camcorder's Power Switch to " PLAY " while pressing down the Lock Button located on the switch and turn on the PC.

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- ***Never connect the PC connection cable and the DV cable simultaneously to the camcorder. Connect only the cable you wish to use to the camcorder.***
- *The date/time information cannot be captured into the PC.*
- *Refer to the instruction manuals of the provided Software.*
- *Also refer to the manufacturer's instruction manual for the DV connector-equipped capture board.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***


Connector cover
Power Switch
To DV IN/OUT
Core filter
DV cable (optional)
Core filter
To DV IN connector
To DV connector
Video unit equipped with a DV input connector
To PC connector
Digital Printer
Core filter
PC connection cable (provided)
To RS-232C
PC

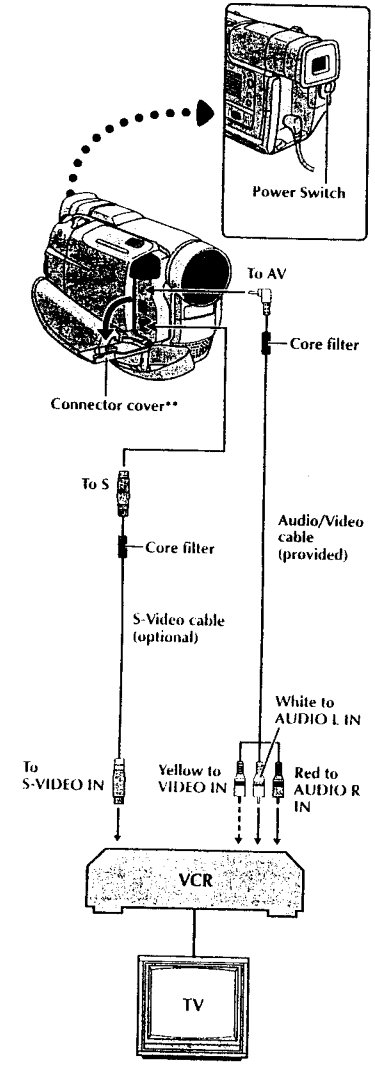
Connection To A Video Unit Equipped With A DV Connector

Connection to the GV-DT3 Digital Printer (optional) allows you to print out images or transfer them to a PC. It is also possible to copy recorded scenes from the camcorder onto another video unit equipped with a DV connector. This function is called Digital Dubbing (☞ pg. 47), which offers virtually no image or sound deterioration.

1. Make sure all units are turned off.
2. Make connections to the device you want to connect to using a DV cable, as shown in the illustration.
3. If necessary, connect the PC connection cable (provided) to the printer's PC connector and the PC's RS-232C connector.
4. Turn the camcorder's Power Switch to " PLAY " while pressing down the Lock Button located on the switch and turn on the other units.

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- *For Digital Dubbing, this camcorder can be connected only to one device at a time. This camcorder can also be used as a recorder (☞ pg. 47).*
- *If Still Playback, Slow-Motion Playback, Fast-Forward or Rewind is attempted with the camcorder connected to a video unit via the DV connector, the image will take on an effect similar to a colored mosaic pattern or it will become black.*
- *Also refer to the instruction manuals of the connected units.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***



* Connect when an S-Video cable is not used.
** When connecting the cables, open this cover.

Dubbing To A VCR

1 Following the illustration, connect the camcorder and the VCR. Also refer to pg. 42 and 43.

2 Set the **VIDEO/DSC** Switch to "VIDEO", then set the camcorder's Power Switch to "PLAY" while pressing down the Lock Button located on the switch, turn on the VCR's power, and insert the appropriate cassettes in the camcorder and the VCR.

3 Engage the VCR's AUX and Record-Pause modes.

4 Engage the camcorder's Play mode to find a spot just before the edit-in point. Once it is reached, press **▶/❚❚** on the camcorder.

5 Press **▶/❚❚** on the camcorder and engage the VCR's Record mode.

6 Engage the VCR's Record-Pause mode and press **▶/❚❚** on the camcorder.

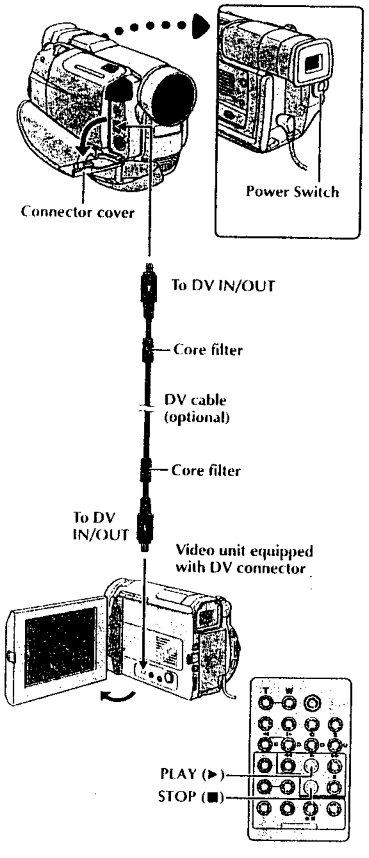
7 Repeat steps **4** through **6** for additional editing, then stop the VCR and camcorder when finished.

NOTES:

- ***Use the provided Audio/Video cable, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- ***The S-Video cable is optional. Be sure to use the YTU94146A S-Video cable.***
  Consult the JVC Service Center described on the sheet included in the package for details on its availability. Make sure to connect the end with a core filter to the camcorder. The core filter reduces interference.
- *You can use Playback Zoom (☞ pg. 52) or Playback Special Effects (☞ pg. 53) in step **5**.*
- *Before you start dubbing, make sure that the indications do not appear on the connected TV. If they do, they are being recorded onto the new tape.*

To choose whether or not the following displays appear on the connected TV . . .

- Date/Time
  .... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Time Code
  .... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Playback Sound Mode, Tape Speed And Tape Running Displays
  .... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 34). Or, press **DISPLAY** on the remote control.



Dubbing To Or From A Video Unit Equipped With A DV Connector (Digital Dubbing)

It is also possible to copy recorded scenes from the camcorder onto another video unit equipped with a DV connector. Since a digital signal is sent, there is little if any image or sound deterioration.

[To use this camcorder as a player]

1 Make sure the camcorder's power is off.

2 Connect the camcorder to your video unit equipped with a DV connector using a DV cable as shown in the illustration.

3 Press ▶ to play back the source tape.

4 While watching the playback on the monitor, engage the DV connector-equipped video unit's record mode from the spot on the source tape you want to begin recording.

NOTES:

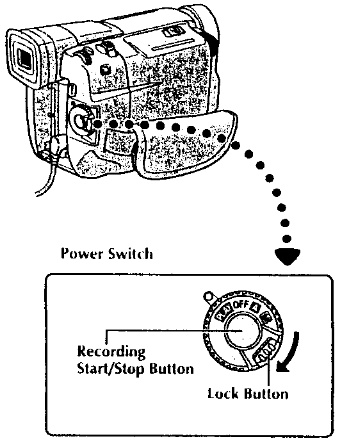
- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 9).***
- *If the remote control is used when both the player and recorder are JVC video units, both units will perform the same operation. To prevent this from happening, press the buttons on both units.*
- *For Digital Dubbing, this camcorder can be connected only to one device at a time. This camcorder can also be used as a recorder.*
- *If a blank portion or disturbed image is played back on the player during dubbing, the dubbing may stop so that an unusual image is not dubbed.*
- *Even though the DV cable is connected correctly, sometimes the image may not appear in step 3. If this occurs, turn off the power and make connections again.*
- *If "Playback Zoom" (☞ pg. 52), "Playback Special Effects" (☞ pg. 53) or "Snapshot" is attempted during playback, only the original playback image recorded on the tape is output from the DV IN/OUT connector.*
- ***When using a DV cable, be sure it has a core filter attached. The core filter reduces interference.***

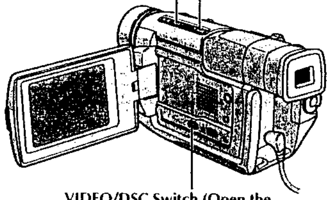
To Use This Camcorder As A Recorder . . .

1. Set the **VIDEO/DSC** Switch to "VIDEO", then turn the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.
2. Set "REC MODE" to "SP" or "LP" in the Menu Screen (☞ pg. 34)
3. Connect the DV cable as shown in the illustration and load a cassette to record on.
4. Press the Recording Start/Stop button to engage the Record-Pause mode. "DV. IN" appears on the screen.
5. Press the Recording Start/Stop button to start recording. "DV. IN" changes to "DV.IN".
6. Press the Recording Start/Stop button again to engage the Record-Pause mode. "DV.IN" returns to "DV. IN".

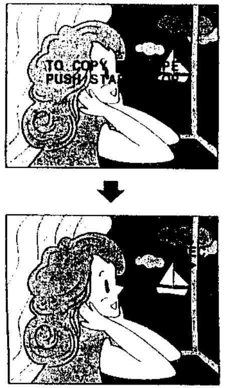
NOTES:

- *Digital Dubbing is performed in the sound mode recorded on the original tape, regardless of the current "SOUND MODE" setting (☞ pg. 25).*
- *During Digital Dubbing, no signals are output from the video or audio connectors.*


Power Switch
Recording Start/Stop Button
Lock Button


Rewind Button (◀◀)
Fast-Forward Button (▶▶)
VIDEO/DSC Switch (Open the LCD monitor to access this switch.)

Display


TO COPY
PUSH START

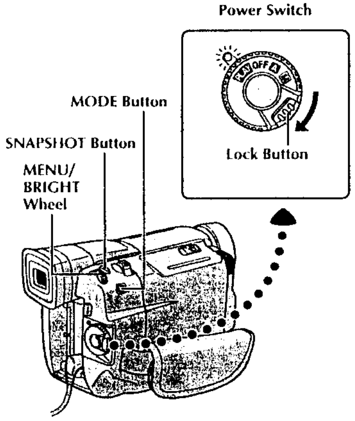
Dubbing Images Stored In The Built-in Memory To A Tape

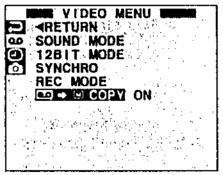
Images can be dubbed from the camcorder's built-in memory to a tape.

1. Load a cassette (☞ pg. 12).
2. To locate the point where you wish to dub a still image, play back the tape. Stop playback at the desired point.
3. Set the **VIDEO/DSC** Switch to "DSC", then set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.
4. To select a still image to be dubbed, perform Index Playback (☞ pg. 37) or press ◀◀ or ▶▶ to select the image you wish.
5. To engage Dub-Standby, press the Recording Start/Stop Button. The message "TO COPY TO TAPE PUSH START/STOP" appears.
6. While the message is being displayed, press the Recording Start/Stop Button. The selected still image is recorded on the tape for approx. 5 seconds.
   - The REC ▶▶▶ indicator disappears when dubbing is complete.

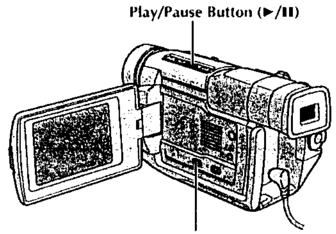
NOTE:

If the Recording Start/Stop Button is pressed in step 5 when the tape's erase protection tab is set to "SAVE", the message "COPYING FAILED" is displayed.

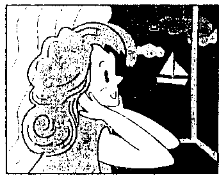

Power Switch
MODE Button
SNAPSHOT Button
MENU/BRIGHT Wheel
Lock Button



VIDEO MENU
◀RETURN
SOUND MODE
12BIT MODE
SYNCHRO
REC MODE
▭ ➡ ▣ COPY ON


Play/Pause Button (▶/❚❚)
VIDEO/DSC Switch (Open the LCD monitor to access this switch.)

Display



Dubbing Images Recorded On A Tape To The Built-in Memory

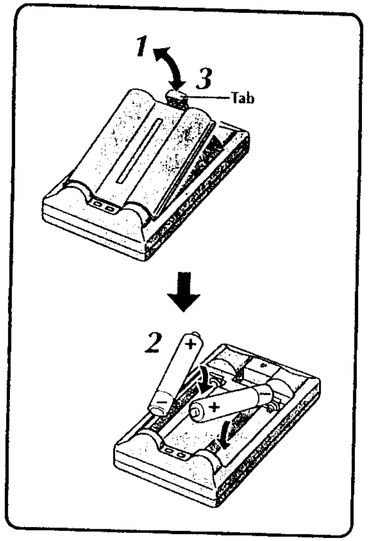
Images can dubbed from a tape to the camcorder's built-in memory.

1. Load a cassette (☞ pg. 12).
2. Set the **VIDEO/DSC** Switch to "VIDEO", then set the Power Switch to "PLAY" while pressing down the Lock Button.
3. Press the **MENU/BRIGHT** wheel. The Menu Screen appears. Rotate it to select "▭" and press it. "VIDEO MENU" appears.
4. Rotate the **MENU/BRIGHT** wheel to select "▭ ➡ ▣ COPY" and press it. The Sub Menu appears. Rotate it to select "ON" and press it. Selection is complete.
5. Rotate the **MENU/BRIGHT** wheel to select "◀RETURN" and press it twice. The normal playback screen resumes.
6. To select a video image to be dubbed, start playback by pressing ▶/❚❚. At the moment you find the image you wish to dub, press it again to engage Still Playback.
7. Press **MODE** to select the Snapshot mode to use for dubbing the image to the built-in memory.
8. To start dubbing, press **SNAPSHOT**. The selected image is stored in the built-in memory.
   - "➡" blinks during dubbing.

NOTES:

- *If **SNAPSHOT** is pressed in step **8** when the built-in memory is full, the message "COPYING FAILED" appears.*
- *If an image recorded on the tape using the WIDE mode (☞ pg. 26) is dubbed to the camcorder's built-in memory, the WIDE mode identifying signal is not dubbed with it.*
- *To use Playback Special Effects with a video image you wish to dub, perform up to step **8** using the remote control (provided) (☞ pg. 53).*

USING THE REMOTE CONTROL UNIT



The Full-Function Remote Control Unit can operate this camcorder from a distance as well as the basic operations (Playback, Stop, Pause, Fast-Forward and Rewind) of your VCR. It also makes additional playback functions possible.

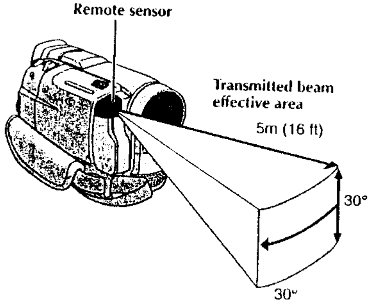
Installing The Batteries

The remote control uses two "AAA (R03)" size batteries. See "General Battery Precautions" (☞ pg. 77).

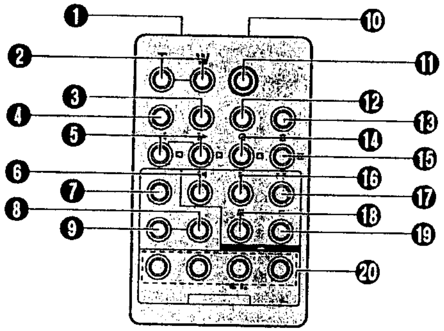
1 Remove the battery compartment cover while pushing up the tab as illustrated.

2 Insert two "AAA (R03)" size batteries in the correct direction.

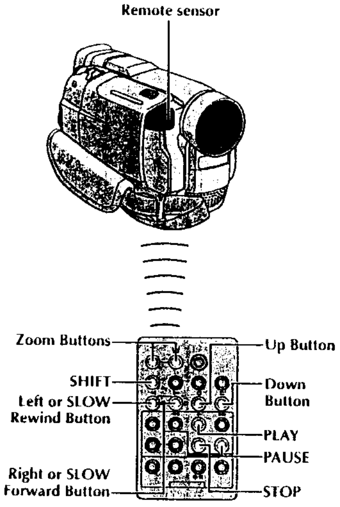
3 Re-attach the battery compartment cover.

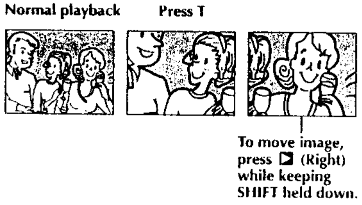


When using the remote control, be sure to point it at the remote sensor. The illustration shows the approximate transmitted beam effective area for indoor use.
The transmitted beam may not be effective or may cause incorrect operation outdoors or when the remote sensor is directly exposed to sunlight or powerful lighting.



Buttons	Functions	
	With the camcorder's Power Switch set to the camera position ("A" or "M").	**With the camcorder's Power Switch set to "PLAY".**
❶ Infrared beam transmitting window	Transmits the beam signal.	
❷ Zoom (T/W) Buttons	Zoom in/out (☞ pg. 20)	Zoom in/out (☞ pg. 52)
❸ DISPLAY Button	—	☞ pg. 43, 46, 55
❹ SHIFT Button	—	☞ pg. 52, 54
❺ SLOW Rewind/Forward Buttons Left/Right Buttons	— —	☞ pg. 52 ☞ pg. 52
❻ REW Button	—	• Rewind/Reverse Shuttle Search on a tape (☞ pg. 33) • Displays previous image in the built-in memory (☞ pg. 36)
❼ FADE/WIPE Button	—	☞ pg. 56
❽ EFFECT ON/OFF Button	—	☞ pg. 53
❾ EFFECT Button	—	☞ pg. 53
❿ PAUSE IN Connector	–	☞ pg. 55
⓫ START/STOP Button	Functions the same as the Recording Start/Stop Button on the camcorder.	
⓬ MBR SET Button	—	☞ pg. 54
⓭ SNAPSHOT Button	Functions the same as **SNAPSHOT** on the camcorder.	
⓮ Up Button INSERT Button	— —	☞ pg. 52 ☞ pg. 61
⓯ Down Button A. DUB Button	— —	☞ pg. 52 ☞ pg. 60
⓰ PLAY Button	—	• Starts Playback of a tape (☞ pg. 33) • Starts Slide Show (☞ pg. 38)
⓱ FF Button	—	• Forward/Forward Shuttle Search on a tape (☞ pg. 33) • Displays next image in the built-in memory (☞ pg. 36)
⓲ STOP Button	—	• Stops the tape (☞ pg. 33) • Stops Slide Show (☞ pg. 38)
⓳ PAUSE Button	—	Pauses the tape (☞ pg. 52)
⓴ R.A.EDIT Buttons	—	☞ pg. 54 – 59




Normal playback
Press T
To move image, press ▶ (Right) while keeping SHIFT held down.

FEATURE: Slow-Motion Playback

PURPOSE:

To allow slow-speed search in either direction during video playback.

OPERATION:

1) To change from normal to Slow-Motion Playback, press **PAUSE (❚❚)** to engage Still Playback then press **SLOW (◂I** or **I▸)** more than approx. 2 seconds. After approx. 1 minute in Slow Rewind or approx. 2 minutes in Slow Forward, normal playback resumes.

■ To stop Slow-Motion Playback, press **PLAY (▶)**.

NOTES:

- *During Slow-Motion Playback, due to digital image processing, the picture may take on a mosaic effect.*
- *After **SLOW** (◂I or I▸) is pressed and held, the still image may be displayed for a few seconds, followed by a blue screen for a few seconds. This is not a malfunction.*
- *There may be a small margin between the slow-motion playback start point you chose and the actual start point for Slow-Motion Playback.*
- *During Slow-Motion Playback, there will be disturbances in video and the picture may seem unstable, especially with steady images. This is not a malfunction.*
- *During Slow-Motion Playback, press **PAUSE (❚❚)** to pause playback.*

FEATURE: Frame-By-Frame Playback

PURPOSE:

To allow frame-by-frame search during video playback.

OPERATION:

1) To change from normal to Frame-By-Frame Playback, press **PAUSE (❚❚)** to engage Still Playback then press **SLOW (I▸)** repeatedly for forward or **SLOW (◂I)** repeatedly for reverse. Each time it is pressed, the frame is played back.

FEATURE: Playback Zoom

PURPOSE:

To magnify the recorded image up to 25X at any time during playback.

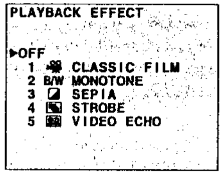
OPERATION:

1) Press **PLAY (▶)** to find the scene of interest.
2) Press the Zoom Buttons **(T/W)** on the remote control. Make sure the remote control is pointed at the camcorder's remote sensor. Pressing **T** zooms in.
3) You can move the image on screen around to find a particular portion of the picture. While holding down **SHIFT**, press **◀ (Left)**, **▶ (Right)**, **▲ (Up)** and **▼ (Down)**.

■ To end zoom, press and hold **W** until magnification returns to normal. Or, press **STOP (■)** and then press **PLAY (▶)**.

NOTES:

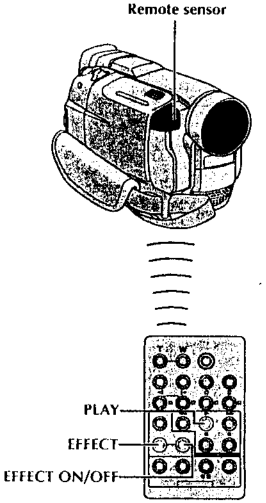
- *Zoom can also be used during slow-motion and still playback.*
- *Due to digital image processing, the quality of the image may suffer.*



PLAYBACK EFFECT

▶OFF
1 CLASSIC FILM
2 B/W MONOTONE
3 SEPIA
4 STROBE
5 VIDEO ECHO

PLAYBACK EFFECT Select Menu



FEATURE: Playback Special Effects

PURPOSE:

To allow you to add creative effects to the video playback image.

OPERATION:

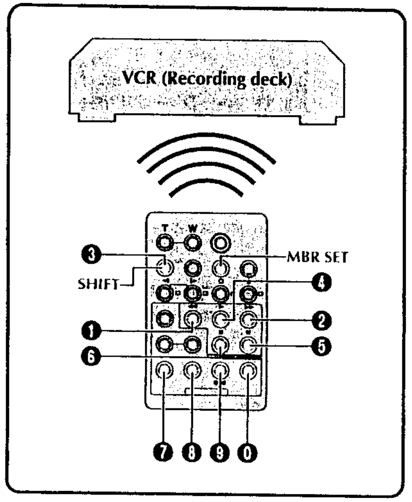
1) To start playback, press **PLAY (▶)**.
2) Point the remote control at the camcorder's remote sensor and press **EFFECT**. The PLAYBACK EFFECT Select Menu appears.
3) Move the highlight bar to the desired effect by pressing **EFFECT**. The selected function is activated and after 2 seconds the menu disappears.

■ To deactivate the selected effect, press **EFFECT ON/OFF** on the remote control. Pressing it again re-activates the selected effect.

■ To change the selected effect, repeat from step 2 above.

NOTES:

- *When some Playback Special Effects are used, the Multi-Analyzer 4 and Multi-Analyzer 9 Snapshot modes (☞ pg. 18) are not available.*
- *The effects that can be used during playback are Classic Film, Monotone, Sepia, Strobe and Video Echo. The effects work the same in playback as they did in recording. Refer to page 30 for more information.*



VCR CODE LIST

VCR BRAND NAME	BUTTONS (A)	(B)
GE	❶ ❾ ❾ ❾	❶ ❷ ⓿ ❹
HITACHI	❻ ❻	❻ ❸
JVC A B C	❾ ❾ ❾	❶ ❻ ❸
MAGNAVOX	❾ ❶ ❼ ❼	❺ ❶ ❶ ❻
MITSUBISHI	❻ ❻	❼ ❽
NEC	❸ ❸	❼ ❽
PHILIPS	❶ ❾ ❶ ❾ ❾ ❾ ❶	❾ ❺ ❶ ❹ ❶ ❻ ❷

VCR BRAND NAME	BUTTONS (A)	(B)
PHILIPS	❸ ❼	❸ ❷
PANASONIC	❶ ❶ ❶ ❾ ❶	❸ ❼ ❶ ❹ ❽
RCA	❾ ❾ ❻ ❻ ❾	❷ ❹ ❻ ❸ ⓿
SANYO	❸ ❸	❻ ❺
SHARP	❶ ❶	❺ ⓿
SONY	❻ ❻ ❸ ❸	❺ ⓿ ❾ ❶
TOSHIBA	❻ ❻	❾ ❶
ZENITH	❶	❻

Random Assemble Editing [R.A.Edit]

Create edited videos easily using your camcorder as the source player. You can select up to 8 "cuts" for automatic editing, in any order you like. R.A.Edit is more easily performed when the MBR (Multi-Brand Remote) is set to operate with your brand of VCR (see VCR CODE LIST), but can also be performed by operating the VCR manually.
Before operation, make sure the batteries are installed in the remote control (☞ pg. 50).

SET REMOTE/VCR CODE

1 Turn off the power to the VCR and point the remote towards the VCR's infrared sensor. Then, referring to the VCR CODE LIST, press and hold **MBR SET**, and press button (A) and then (B).
The code is automatically set once you release **MBR SET**, and the VCR's power comes on.

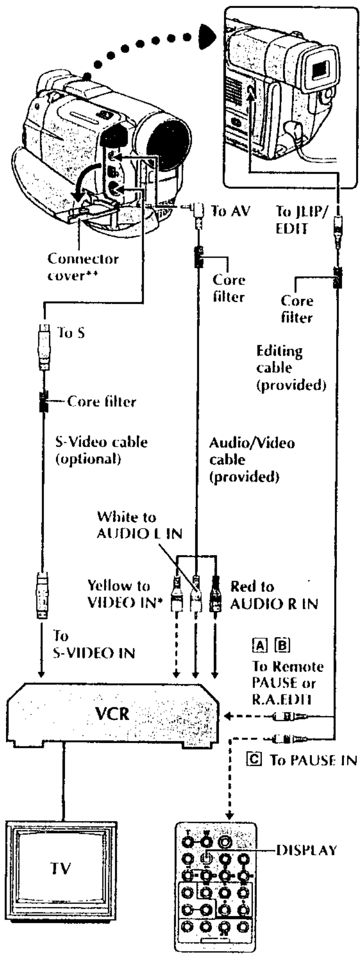
2 Make sure the VCR's power is on. Then, while holding **SHIFT**, press the button on the remote for the desired function. The functions the remote can control are PLAY, STOP, PAUSE, FF, REW and VCR REC STBY (you do not need to press **SHIFT** for this one).
You are now ready to try Random Assemble Editing.

IMPORTANT

Although the MBR is compatible with JVC VCRs and those of many other makers, it may not work with yours or may offer limited functions.

NOTES:

- *If the VCR's power does not come on in step 1, try another code from the VCR CODE LIST.*
- *Some brands of VCR do not come on automatically. In this case, turn the power on manually and try step 2.*
- *If the remote control is not able to control the VCR, use the controls on the VCR.*
- *When the remote control's batteries run out, the VCR brand you have set will be erased.*
In that case, replace the old battery with a new one to reset the VCR brand.



* Connect when an S-Video cable is not used.
** When connecting cables, open this cover.

ATTENTION FOR EDITING CABLE

Make sure you connect the end with the core filter (plug which has 3 rings around the pin) to the camcorder.

MAKE CONNECTIONS

Also refer to pg. 42 and 43.

1 **A A JVC VCR equipped with a remote pause connector . . .**
... connect the editing cable to the Remote PAUSE connector.
B A JVC VCR not equipped with a remote pause connector but equipped with an R.A. EDIT connector . . .
... connect the editing cable to the R.A.EDIT connector.
C A VCR other than above . . .
... connect the editing cable to the remote control's PAUSE IN connector.

2 Insert a recorded tape into the camcorder. Set the **VIDEO/DSC** Switch to "VIDEO", then set the Power Switch to "PLAY" while pressing down the Lock Button located on the switch.

3 Turn the VCR power on, insert a recordable tape and engage the AUX mode (refer to the VCR's instructions).

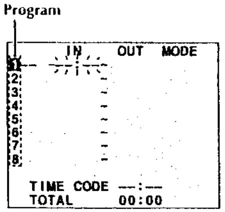
NOTES:

- *Before Random Assemble Editing, make sure the indications do not appear on the TV monitor. If they do, they will be recorded onto the new tape.*

To choose whether or not the following displays appear on the connected TV . . .
- Date/Time
.... set "DATE/TIME" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Time Code
.... set "TIME CODE" to "ON" or "OFF" in the Menu Screen (☞ pg. 34).
- Playback Sound Mode, Tape Speed And Tape Running Displays
.... set "ON SCREEN" to "LCD" or "SIMPLE" in the Menu Screen (☞ pg. 34). Or, press **DISPLAY** on the remote control.

- ***Use the provided cables, making sure to connect the end with a core filter to the camcorder. The core filter reduces interference.***
- ***The S-Video cable is optional. Be sure to use the YTU94146A S-Video cable.***
Consult the JVC Service Center described on the sheet included in the package for details on its availability. Make sure to connect the end with a core filter to the camcorder. The core filter reduces interference.
- *When editing on a VCR equipped with a DV input connector, an optional DV cable can be connected instead of an S-Video cable and audio/video cable.*

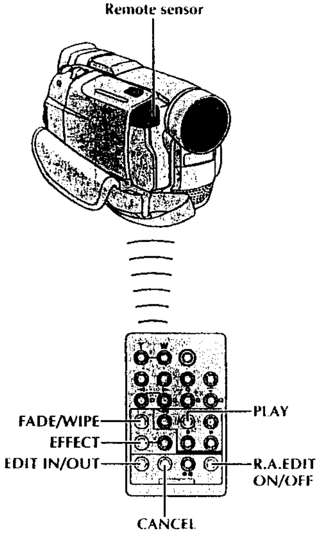
CONTINUED ON NEXT PAGE



```
     IN       OUT   MODE
1 -- --:--  -
2           -
3           -
4           -
5           -
6           -
7           -
8           -

 TIME CODE --:--
 TOTAL      00:00
```

Random Assemble Editing Menu



SELECT SCENES

4 Point the remote control at the camcorder's remote sensor. Press **PLAY (▶)** and then press **R.A.EDIT ON/OFF** on the remote control.
The Random Assemble Editing Menu appears.

5 If using a Fade/Wipe at the beginning of the scene, press **FADE/WIPE** on the remote control.
- Cycle through the effects by pressing repeatedly, and stop when the one you want is displayed.
- You cannot use a Picture Wipe/Dissolve at the beginning of Program 1.

6 At the beginning of the scene, press **EDIT IN/OUT** on the remote control. The Edit-In position appears in the Random Assemble Editing Menu.

7 At the end of the scene, press **EDIT IN/OUT**. The Edit-Out position appears in the Random Assemble Editing Menu.

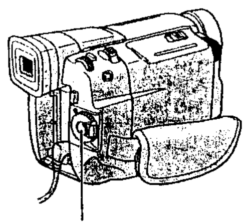
8 If using a Fade/Wipe at the end of the scene, press **FADE/WIPE**.
- Cycle through the effects by pressing repeatedly, and stop when the one you want is displayed.
- If you select a Fade/Wipe effect for an Edit-Out point, the effect is automatically applied to the following Edit-In point.
- You cannot use a Picture Wipe/Dissolve at the end of the last scene.
- When you use Fade/Wipe effects, that time is included in the total time (this does not apply to Picture Wipe/Dissolve).

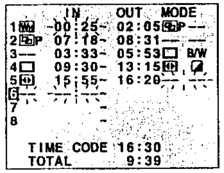
9 If using Playback Special Effects, press **EFFECT** (☞ pg. 53).

10 Repeat steps **6** through **9** to register additional scenes.
- To change previously registered points, press **CANCEL** on the remote control. The registered points disappear, one at a time, from the most recently registered point.
- If you are not using Fade/Wipe or Program AE with special effects, repeat steps **6** and **7** only.

NOTES:

- *When choosing a scene, set Edit-In and Edit-Out points so that there is a relatively large difference between them.*
- *If the search time for an in-point exceeds 5 minutes, the recording deck's Record-Standby mode will be canceled and editing will not take place.*
- *If there are blank portions before or after the Edit-In and Edit-Out points, a blue screen may be included in the edited version.*
- *Since time codes register time only as accurately as seconds, the time code total time may not match the total program time exactly.*
- *Turning off the camcorder's power erases all registered Edit-In and Edit-Out points.*
- *If you select Sepia or Monotone mode from Program AE with special effects, you cannot use the Dissolve or Black & White Fader. In this case the Dissolve or Black & White indicator begins blinking. Once the next Edit-In point is registered, the effect is turned off. To combine these effects, use Sepia or Monotone during recording, then use the Dissolve or Black & White Fader during Random Assemble Editing.*
- *It is not possible to use Fade/Wipe effects and Program AE with special effects during Random Assemble Editing using a DV cable.*

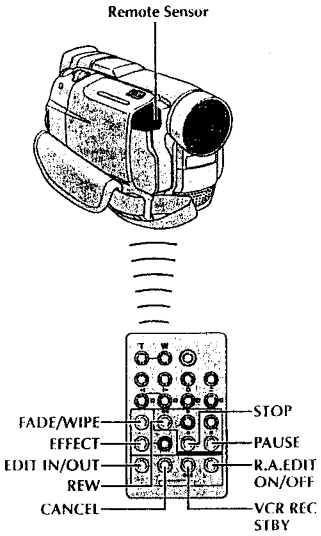




```
     IN       OUT   MODE
1   -00:25- 02:05 P --
2  P 07:18- 08:31 -- --
3 -- 03:33- 05:53   B/W
4    09:30- 13:15
5    15:55- 16:20 -- --
6 -- --:--  -
7           -
8           -

 TIME CODE 16:30
 TOTAL      9:39
```

Random Assemble Editing Menu



AUTOMATIC EDITING TO VCR

11 Rewind the tape in the camcorder to the beginning of the scene you want to edit and press **PAUSE (II)**.

12 Point the remote control towards the VCR's remote sensor and press **VCR REC STBY (●II)**, or manually engage the VCR's Record-Pause mode.

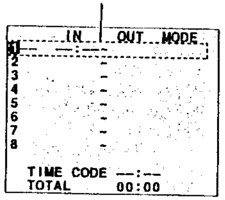
13 Press the Recording Start/Stop Button on the camcorder. Editing proceeds as programed, right through to the end of the last registered scene.
- Pressing **START/STOP** on the remote control does not start editing.
- When dubbing is complete, the camcorder enters the Pause mode, and the VCR enters its Record-Pause mode.
- If you do not register an Edit-Out point, the tape will be dubbed all the way to the end automatically.
- If you operate the camcorder during automatic editing, the VCR will enter its Record-Pause mode and automatic editing will stop.

14 Engage the Stop modes for the camcorder and the VCR.
To make the R.A.Edit counter display disappear, press **R.A.EDIT ON/OFF** on the remote control.

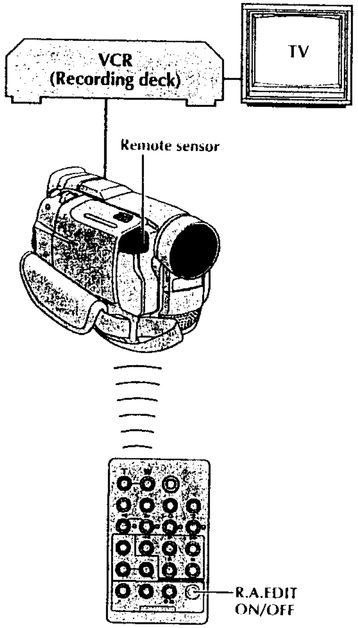
NOTES:

- *Pressing **R.A.EDIT ON/OFF** on the remote control clears all settings registered during Random Assemble Editing.*
- *When the editing cable is connected to the remote control's Pause In connector during dubbing, make sure the remote control is pointed at the VCR's sensor, and the path between the two is unobstructed.*
- *Random Assemble Editing may not function properly when using a tape including several duplicated time codes (☞ pg. 21).*

Program 1



Random Assemble Editing Menu



For More Accurate Editing

Some VCRs make the transition from Record-Pause to Record mode faster than others. Even if you begin editing for the camcorder and the VCR at exactly the same time, you may lose scenes you wanted, or find that you have recorded scenes you did not want. For a cleanly edited tape, confirm and adjust the timing of the camcorder against your VCR.

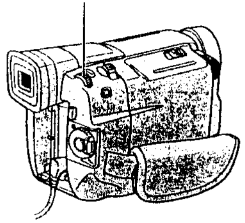
DIAGNOSING VCR/CAMCORDER TIMING

1 Play back the tape in the camcorder, then point the remote control at the camcorder's remote sensor and press **R.A.EDIT ON/OFF**.
The Random Assemble Editing Menu appears.

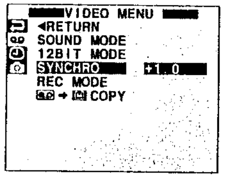
2 Perform Random Assemble Editing on Program 1 only. In order to check VCR and camcorder timing, select the beginning of a scene transition as your Edit-In point.

3 Play back the dubbed scene.
- If any images from the scene prior to the transition you chose for your Edit-In point were recorded, that means your VCR moves too quickly from Record-Pause to Record mode.
- If the scene you tried to dub starts in progress, the VCR is slow to start recording.

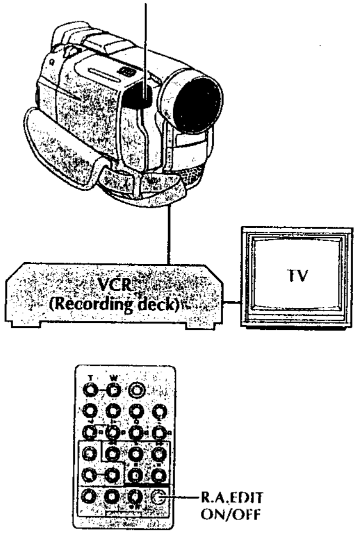
MENU/BRIGHT Wheel



Display


VIDEO MENU
◄RETURN
SOUND MODE
12BIT MODE
SYNCHRO +1.0
REC MODE
→ COPY

Remote sensor



ADJUSTMENT OF VCR/CAMCORDER TIMING

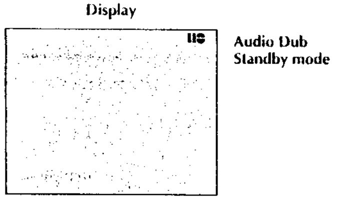
4 Point the remote control at the camcorder's remote sensor and press **R.A.EDIT ON/OFF** to make the Random Assemble Editing menu disappear, then press the **MENU/BRIGHT** wheel. The Menu Screen appears.

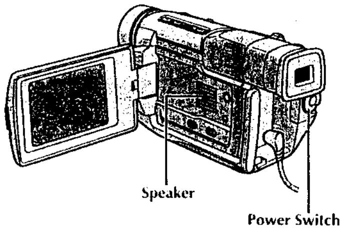
5 Rotate the **MENU/BRIGHT** wheel to select "▣" and press it. "VIDEO MENU" appears. Then, rotate it to "SYNCHRO" and press it. The value for "SYNCHRO" is highlighted.

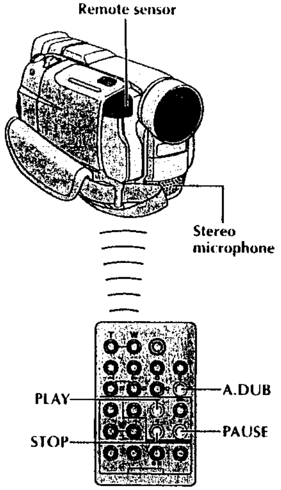
6 Based on the diagnostics performed (☞ pg. 58), you can now advance the VCR's record timing by rotating the **MENU/BRIGHT** wheel towards "+". You can also delay the VCR's record timing by rotating the **MENU/BRIGHT** wheel towards "–". The adjustment range is from –1.3 to +1.3 seconds, in 0.1-second increments. Press the **MENU/BRIGHT** wheel to finish the setting.

7 Rotate the **MENU/BRIGHT** wheel to select "◄RETURN" and press it twice.
Now perform Random Assemble Editing beginning with step **4** on page 56.

NOTES:
- *Before performing actual Random Assemble Editing, do a few Random Assemble Editing trial runs to check whether the value you have input is appropriate or not, and make adjustments accordingly.*
- *Depending on the recorder, there may be situations where the timing difference cannot be fully corrected.*







Audio Dubbing

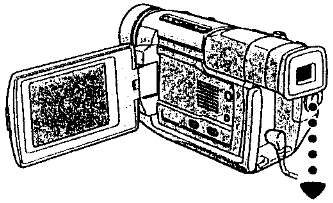
The audio track can be customized only when recorded in the 12-bit mode (☞ pg. 25).

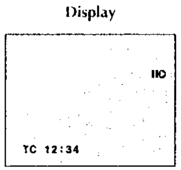
NOTES:
- *Audio Dubbing is not possible on a tape recorded in 16-bit audio, on a tape recorded in the LP mode or on a blank portion of a tape.*
- *To perform Audio Dubbing while watching on the television, make connections (☞ pg. 42).*

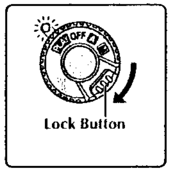
1. Play back the tape to locate the point where editing will start, then press **PAUSE (II)**.
2. While holding **A.DUB (⊜)** on the remote control, press **PAUSE (II)**. "**II⊜**" appears.
3. Press **PLAY (▶)**, then begin "narrating". Speak into the microphone.
   - To pause dubbing, press **PAUSE (II)**.
4. To end Audio Dubbing, press **PAUSE (II)**, then **STOP (■)**.

To hear the dubbed sound during playback . . .
.... set "12BIT MODE" to "SOUND 2" or "MIX" in the Menu Screen (☞ pg. 34, 35).

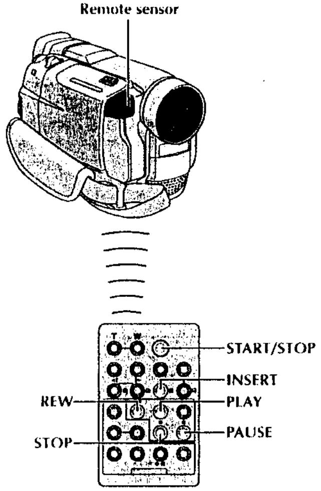
NOTES:
- *Sound is not heard from the speaker during Audio Dubbing.*
- *When editing onto a tape that was recorded at 12-bit, the old and new soundtracks are recorded separately.*
- *If you dub onto a blank space on the tape, the sound may be disrupted. Make sure you only edit recorded areas.*
- *If feedback or howling occurs during TV playback, move the camcorder's microphone away from the TV, or turn down the TV's volume.*
- *If you change from 12-bit to 16-bit in mid-recording and then use the tape for Audio Dubbing, it is not effective from the point where 16-bit recording began.*
- *During Audio Dubbing, when the tape moves to scenes recorded in the LP mode, scenes recorded in 16-bit audio or a blank portion, Audio Dubbing stops (☞ pg. 73).*







Power Switch



Insert Editing

You can record a new scene into a previously recorded tape, replacing a section of the original recording with minimal picture distortion at the in and outpoints. The original audio remains unchanged.

NOTES:
- *Before performing the following steps, make sure that "TIME CODE" is set to "ON" in the Menu Screen (☞ pg. 34).*
- *Insert Editing is not possible on a tape recorded in the LP mode or on a blank portion of a tape.*
- *To perform Insert Editing while watching in the television, make connections (☞ pg. 42).*

1. Play back the tape, locate the Edit-Out point and press **PAUSE (II)**. Confirm the time code at this point (☞ pg. 35).
2. Press **REW (◀◀)** until the Edit-In point is located, then press **PAUSE (II)**.
3. Press and hold **INSERT (O)** on the remote control, then press **PAUSE (II)**. "**IIO**" and the Time Code (min.:sec.) appear and the camcorder enters Insert-Pause mode.
4. Press **START/STOP** to begin editing.
   - Confirm the insert at the time code you checked in step **1**.
   - To pause editing, press **START/STOP**. Press it again to resume editing.
5. To end Insert Editing, press **START/STOP**, then **STOP (■)**.

NOTES:
- *Program AE with special effects (☞ pg. 30) can be used to spice up the scenes being edited during Insert Editing.*
- *During Insert Editing, the date and time information changes.*
- *If you perform Insert Editing onto a blank space on the tape, the audio and video may be disrupted. Make sure you only edit recorded areas.*
- *During Insert Editing, when the tape moves to scenes recorded in the LP mode or a blank portion, Insert Edting stops (☞ pg. 73).*

TROUBLESHOOTING

If, after following the steps in the chart below, the problem still exists, please consult your nearest JVC dealer.

The camcorder is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.) and wait a few minutes; and then re-connect it and proceed as usual from the beginning.

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
1. No power is supplied.	*1.* • The power is not connected properly. • The battery is dead.	*1.* • Connect the AC Power Adapter/Charger securely (☞ pg. 9). • Replace the dead battery with a fully charged one (☞ pg. 8, 9).
2. "SET DATE/TIME!" appears.	*2.* • The date/time is not set. • The built-in clock battery has run out and the previously set date/time has been erased.	*2.* • Set the date/time (☞ pg. 11). • Consult your nearest JVC dealer for replacement.
3. Recording cannot be performed.	*3.* — For Video Recording — • The tape's erase protection tab is set to "SAVE". • The Power Switch is set to "PLAY" or "OFF". • The **VIDEO/DSC** Switch is set to "DSC". • "TAPE END" appears. • The cassette holder cover is open. — For D.S.C. Recording — • The **VIDEO/DSC** Switch is set to "VIDEO". • The camcorder's built-in memory is full.	*3.* • Set the tape's erase protection tab to "REC" (☞ pg. 12). • Set the Power Switch to "A" or "M" (☞ pg. 15). • Set the **VIDEO/DSC** Switch to "VIDEO". • Replace with new cassette (☞ pg. 12). • Close the cassette holder cover. • Set the **VIDEO/DSC** Switch to "DSC". • Delete unwanted still images (☞ pg. 40).
4. There is no picture.	*4.* • The camcorder is not getting power, or some other malfunction exists.	*4.* • Turn the camcorder's power off and on again (☞ pg. 15).
5. Some functions are not available using **MENU/BRIGHT**.	*5.* • The Power Switch is set to "A".	*5.* • Set the Power Switch to "M" (☞ pg. 15).
6. The focus does not adjust automatically.	*6.* • Focus is set to the Manual mode. • The recording was done in a dark place, or the contrast was low. • The lens is dirty or covered with condensation.	*6.* • Set Focus to the Auto mode (☞ pg. 23). • Clean the lens and check the focus again (☞ pg. 76).
7. The cassette will not load properly.	*7.* • The cassette is in the wrong position. • The battery's charge is low.	*7.* • Set it in the right position (☞ pg. 12). • Install a fully charged battery (☞ pg. 8, 9).
8. Snapshot mode cannot be used.	*8.* • The Squeeze mode is selected.	*8.* • Disengage the Squeeze mode (☞ pg. 26).
9. The color of Snapshot looks strange.	*9.* • The light source or the subject does not include white. Or there are various different light sources behind the subject. • The Sepia or Monotone mode is activated.	*9.* • Find a white subject and compose your shot so that it also appears in the frame (☞ pg. 18, 19). • Turn off Sepia and Monotone (☞ pg. 28).
10. The image taken using Snapshot is too dark.	*10.* • Shooting was performed under backlit conditions.	*10.* • Press the **BACKLIGHT** Button (☞ pg. 31).
11. Digital Zoom does not work.	*11.* • 10X optical zoom is selected. • "P.AE/EFFECT" is set to "VIDEO ECHO" in the Menu Screen. • Picture Wipe or Dissolve are being used in a scene transition.	*11.* • Set "ZOOM" to "40X" or "250X" in the Menu Screen (☞ pg. 25). • Disengage the "VIDEO ECHO" mode (☞ pg. 20, 30). • Wait until the Picture Wipe or Dissolve effects are completed (☞ pg. 20, 28).
12. Program AE with special effects and Fade/Wipe Effects do not work.	*12.* • The Power Switch is set to "A".	*12.* • Set the Power Switch to "M" (☞ pg. 28, 30).
13. The Black & White Fader does not work.	*13.* • The Sepia or Monotone mode is activated.	*13.* • Turn off Sepia and Monotone (☞ pg. 28, 30).
14. The Dissolve function does not work.	*14.* • The Sepia, Monotone or Slow Shutter mode of Program AE with special effects is activated. • "WIDE MODE" is set to "SQUEEZE" in the Menu Screen. • The previously selected mode of Program AE with special effects was changed after the last selected scene for editing was registered.	*14.* • Turn off Sepia, Monotone or Slow Shutter before adding Dissolve to a scene transition (☞ pg. 28, 30). • Set "WIDE MODE" to "CINEMA" or "OFF" mode (☞ pg. 26). • Make sure you have selected the mode of Program AE with special effects you want before starting editing (☞ pg. 28, 30).

CONTINUED ON NEXT PAGE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
15. The Picture Wipe and Dissolve functions do not work.	*15.* • The last selected editing scene is ending. • At the end of the last selected scene for editing, the Power Switch was set to "OFF". • The power is off.	*15.* • Select Picture Wipe or Dissolve before beginning recording. The effects are then automatically activated (☞ pg. 28). • Do not turn off the camcorder's power after setting Edit-In and Edit-Out points, as they will all be erased (☞ pg. 28). • The camcorder automatically shuts off after 5 minutes have elapsed in the Record-Standby mode. Make sure you continue operations within 5 minutes after engaging Record-Standby mode (☞ pg. 28).
16. The picture wipe function does not work.	*16* • The Slow Shutter mode is activated. • "WIDE MODE" is not set to "OFF".	*16.* • Disengage the Slow Shutter mode or set "WIDE MODE" to "OFF" before preparing to use the Picture Wipe (☞ pg. 26, 28, 30).
17. Scene transition does not go as expected.	*17.* • When using "Picture Wipe/ Dissolve" (☞ pg. 28), there is a delay of a fraction of a second between the previous record stop-point and the Dissolve start-point. This is normal, but this slight delay becomes especially noticeable when shooting fast-moving subject or during rapid panning.	*17.* —
18. The Video Echo mode does not work.	*18.* • The Picture Wipe or Dissolve functions are in use. • "WIDE MODE" is set to "SQUEEZE" in the Menu Screen. • A Fade-In or Fade-Out is in progress.	*18.* • Set "WIDE MODE" to "CINEMA" or "OFF" mode (☞ pg. 26). • Do not try to use the Video Echo mode during a Fade-In or Fade-Out (☞ pg. 28, 30).

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
19. Even when Slow Shutter is not selected, the image looks like it is activated.	*19* • When shooting in the dark, the unit becomes highly sensitive to light and the image takes on an effect similar to Slow Shutter.	*19.* • If you want the lighting to look more natural, set GAIN UP to "AGC" or "OFF" in the Menu Screen (☞ pg. 25).
20. There is no strobe when the Classic Film or Strobe mode is activated.	*20.* • The Picture Wipe or Dissolve function is in use.	*20.* • Do not try to use the Classic Film or Strobe mode during a scene transition (☞ pg. 28, 30).
21. White Balance cannot be activated.	*21.* • The Sepia or Monotone mode is activated.	*21.* • Turn off Sepia or Monotone before setting White Balance (☞ pg. 30, 32).
22. When shooting a subject illuminated by bright light, vertical lines appear.	*22.* • This is a result of exceedingly high contrast, and is not a malfunction.	*22.* —
23. When the screen is under direct sunlight during shooting, the screen becomes red or black for an instant.	*23.* • This is not a malfunction.	*23.* —
24. During recording, the date/ time does not appear.	*24.* • "DATE/TIME" is set to "OFF" in the Menu Screen. • Self-Recording is performed.	*24.* • Set "DATE/TIME" to "ON" in the Menu Screen (☞ pg. 27). • During Self-Recording, the date/time does not appear (☞ pg. 17).
25. Images stored in the built-in memory cannot be deleted.	*25.* • Images stored in the built-in memory are protected.	*25.* • Remove protection from the images stored in the built-in memory and delete them (☞ pg. 39, 40).
26. The indicators and messages do not appear.	*26.* • "ON SCREEN" is set to "SIMPLE" or "TIME CODE" is set to "OFF" in the Menu Screen.	*26.* • Set "ON SCREEN" to "LCD" or "LCD/TV" and set "TIME CODE" to "ON" in the Menu Screen (☞ pg. 27, 34).

CONTINUED ON NEXT PAGE

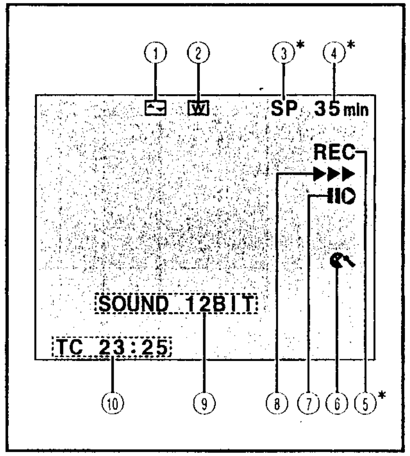
SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
27. Images on the LCD monitor appear dark or whitish.	***27.*** • In places subject to low temperature, images become dark due to the characteristics of the LCD monitor. When this happens, the displayed colors differ from those that are actually recorded. This is not a defect of the camcorder. • When the LCD monitor's fluorescent light reaches the end of its service life, images on the LCD monitor become dark. Consult your nearest JVC dealer.	***27.*** • Adjust the brightness and angle of the LCD monitor (☞ pg. 16, 17).
28. The rear of the LCD monitor is hot.	***28.*** • The light used to illuminate the LCD monitor causes it to become hot.	***28.*** • Close the LCD monitor to turn it off or set the Power Switch to "OFF", and let the unit cool down.
29. The indicators and the image color on the LCD monitor are not clear.	***29.*** • This may occur when the surface or the edge of the LCD monitor is pressed.	***29.***
30. The LCD monitor or viewfinder indications blink.	***30.*** • Certain Fade/Wipe effects, certain modes of Program AE with special effects, "DIS" and other functions that cannot be used together are selected at the same time.	***30.*** • Re-read the sections covering Fade/Wipe effects, Program AE with special effects and "DIS" (☞ pg. 26, 28 – 30).
31. Colored bright spots appear all over the LCD monitor or the viewfinder.	***31.*** • The LCD monitor and the viewfinder are made with high-precision technology. However, black spots or bright spots of light (red, green or blue) may appear constantly on the LCD monitor or the viewfinder. These spots are not recorded on the tape. This is not due to any defect of the unit. (Effective dots: more than 99.99 %)	***31.*** ——

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
32. During recording, sound cannot be heard.	***32.*** • This is normal.	***32.*** ——
33. Play, Rewind and Fast-Forward functions do not work.	***33.*** • The Power Switch is not set to " PLAY ".	***33.*** • Set the Power Switch to " PLAY " (☞ pg. 33).
34. Images in the built-in memory cannot be played back.	***34.*** • The **VIDEO/DSC** Switch is set to "VIDEO". • The Power Switch is set to A " or " M ".	***34.*** • Set the **VIDEO/DSC** Switch to " DSC ". • Set the Power Switch to " PLAY ".
35. The tape is moving, but there is no picture.	***35.*** • Your TV has AV input terminals, but is not set to its VIDEO mode. • The cassette holder cover is open.	***35.*** • Set the TV to the mode or channel appropriate for video playback (☞ pg. 42, 43). • Close the cassette holder cover (☞ pg. 12).
36. The LCD monitor image is distorted.	***36.*** • During playback of the unrecorded portion, High-speed Search and still playback, LCD monitor indications appear distorted. This is not a defect.	***36.*** ——
37. Images on the LCD monitor are jittery.	***37.*** • The speaker volume is too great.	***37.*** • Turn the speaker volume down (☞ pg. 33).
38. Blocks of noise appear during playback, or there is no playback picture and the screen becomes blue.	***38.*** ——	***38.*** • Clean the video heads with an optional cleaning cassette (☞ pg. 78).
39. The LCD monitor, the viewfinder and the lens have become dirty (ex. fingerprints).	***39.*** ——	***39.*** • Wipe them gently with soft cloth. Wiping strongly can cause damage (☞ pg. 76).
40. An unusual mark appears.	***40.*** ——	***40.*** • Check the section of the manual that explains LCD monitor/viewfinder indications (☞ pg. 69 – 73).

CONTINUED ON NEXT PAGE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
41. An error indication (E01 — E06) appears.	***41.*** • A malfunction of some kind has occurred. In this case the camcorder's functions become unusable.	***41.*** • Remove the power supply (battery pack, etc.) and wait a few minutes for the indication to clear. When it does, you can resume using the camcorder. If the indication remains even though you repeat the above two or three times, please consult your nearest JVC dealer.
42. The charger indicator on the AC Power Adapter/ Charger does not light.	***42.*** • The temperature of the battery is extremely high/low. • Charging is difficult in places subject to extremely high/low temperatures.	***42.*** • To protect the battery, it is recommended to charge it in places with a temperature of 10°C to 35°C (50°F to 95°F) (☞ pg. 77).
43. Picture does not appear on the LCD monitor.	***43.*** • The lens cap is attached. • The LCD monitor's brightness setting is too dark.	***43.*** • Remove the lens cap (☞ pg. 16). • Adjust the brightness of the LCD monitor (☞ pg. 16). • If the monitor is tilted upward 180 degrees, open the monitor fully (☞ pg. 17).
44. When the image is printed from the printer, a black bar appears at the bottom of the screen.	***44.*** • This is not a malfunction.	***44.*** • By recording with "DIS" activated (☞ pg. 26) this can be avoided.
45. When the camcorder is connected via the DV connector, the camcorder does not operate.	***45.*** • The DV cable was plugged/ unplugged with power turned on.	***45.*** • Turn the camcorder's power off and on again, then operate it.

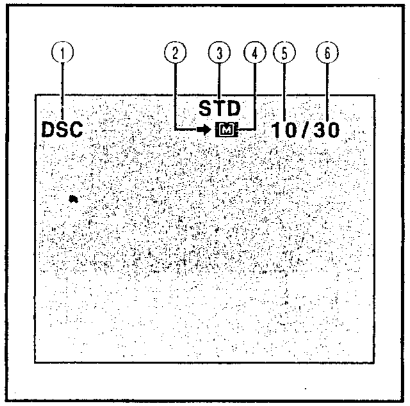
LCD Monitor/Viewfinder Indications During Video Recording Only



*Setting "ON SCREEN" to "SIMPLE" in the Menu Screen removes indications marked with * from the screen (☞ pg. 27, 34).

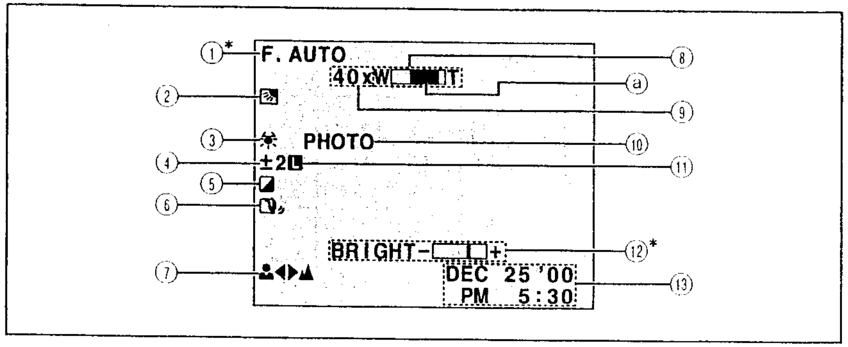
No.	Function
①	Displays the selected Fade/Wipe effect. (☞ pg. 28, 29)
②	Appears when in the Squeeze or Cinema mode. (☞ pg. 26)
③*	Displays the recording mode (SP or LP). (☞ pg. 13)
④*	Displays the tape remaining time. (☞ pg. 16)
⑤*	• "REC" appears during recording. • "PAUSE" appears during Record-Standby mode. (☞ pg. 16)
⑥	Appears when the wind cut mode is engaged to cut down on noise created by wind. (☞ pg. 27)
⑦	Appears when the Insert Editing (▷) or Insert Editing Pause (II▷) mode is engaged. (☞ pg. 61)
⑧	Appears while the tape is running. (☞ pg. 16)
⑨	Displays the sound mode for approx. 5 seconds after turning on the camcorder. (☞ pg. 25)
⑩	Displays the Time Code. (☞ pg. 21, 27)

LCD Monitor/Viewfinder Indications During D.S.C. Recording Only



No.	Function
①	Appears when the VIDEO/DSC Switch is set to "DSC" and the Power Switch is set to "A" or "M". (☞ pg. 15, 19)
②	Appears and blinks during shooting. (☞ pg. 19)
③	Displays the Picture Quality mode of the stored image. There are 2 modes available: FINE and STD (Standard). (☞ pg. 14, 19)
④	Appears during shooting. (☞ pg. 19)
⑤	Displays the number of images that have already been shot. (☞ pg. 19)
⑥	Displays the total number of shots that can be stored, including those already taken. (☞ pg. 19)

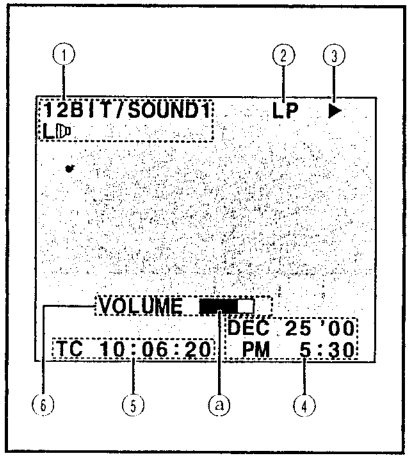
LCD Monitor/Viewfinder Indications During Both Video And D.S.C. Recording



No.	Function
①*	Appears when the power switch is set to " A ". (☞ pg. 15)
②	Appears when backlight compensation is used. (☞ pg. 31)
③	Appears when the white balance is adjusted. (☞ pg. 32)
④	Appears when the exposure is adjusted. (☞ pg. 31)
⑤	Displays the selected Program AE with special effects. (☞ pg. 30)
⑥	Appears when Digital Image Stabilizer ("DIS") is engaged. (☞ pg. 26)
⑦	Appears when the focus is adjusted manually. (☞ pg. 23)
⑧	Appears during zooming. ⓐ Zoom level indicator (☞ pg. 20)
⑨	• Approximate zoom ratio: Appears during zooming. (☞ pg. 20) • A: Appears when "GAIN UP" is set to "AUTO" and the shutter speed is automatically adjusted. (☞ pg. 25)
⑩	Appears when taking a Snapshot. (☞ pg. 18, 19)
⑪	Appears when the iris is locked. (☞ pg. 31)
⑫*	Displays the brightness of the LCD monitor. (☞ pg. 16)
⑬	Displays the date/time. (☞ pg. 11)

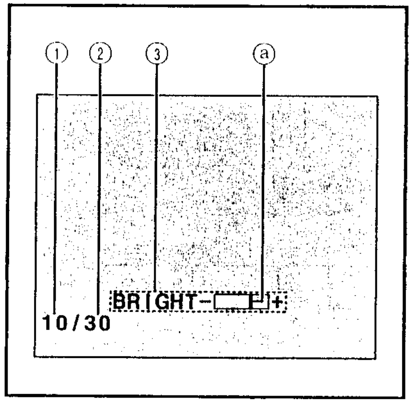
* Setting "ON SCREEN" to "SIMPLE" in the Menu Screen removes indications marked with * from the screen (☞ pg. 27, 34).

LCD Monitor/Viewfinder Indications During Video Playback



No.	Function
①	Displays the sound mode. (☞ pg. 34, 35)
②	Displays the tape speed. (☞ pg. 13)
③	Appears while a tape is running. ▶ : Playback ▶▶ : Fast-Forward/Shuttle search ◀◀ : Rewind/Shuttle search ❚❚ : Pause ❚❚▶ : Forward slow-motion ◀❚❚ : Reverse slow-motion ⊖ : Audio Dubbing ❚❚⊖ : Audio Dubbing Pause
④	Displays the date/time. (☞ pg. 34, 35)
⑤	Displays the time code. (☞ pg. 34, 35)
⑥	BRIGHT : Displays the brightness of the LCD monitor. (☞ pg. 16) VOLUME : Displays the speaker volume. (☞ pg. 33) ⓐ The level indicator moves.

LCD Monitor/Viewfinder Indications During D.S.C. Playback



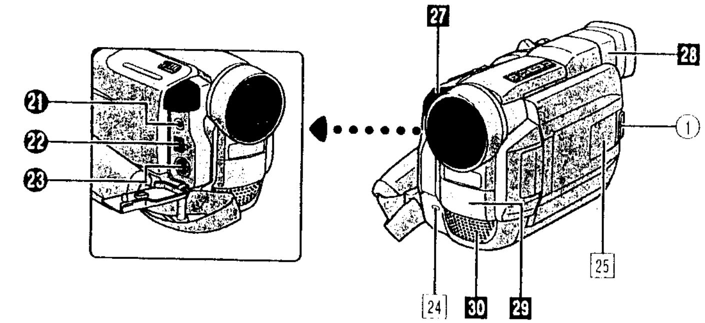
No.	Function
①	Displays the index number of the image file. (☞ pg. 36)
②	Displays the total number of stored images. (☞ pg. 36)
③	Displays the brightness of the LCD monitor or the viewfinder. (☞ pg. 16) ⓐ The level indicator moves.

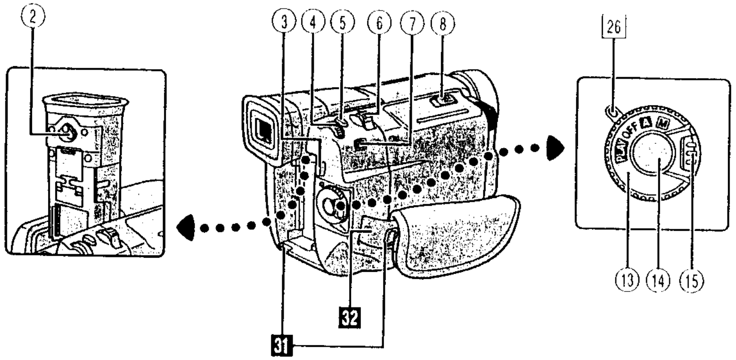
Warning Indications

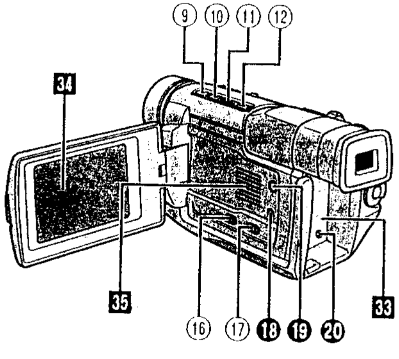
Indications	Function
🔋	Displays the battery remaining power. Remaining power level: high —— (■■■) → (■■) → (■) → ( ) Remaining power level: exhausted ——┘ As the battery power comes close to nil, the battery indicator ( ) blinks. When the battery power is exhausted, power turns off automatically.
📼	Appears when no tape is loaded. (☞ pg. 12)
CHECK TAPE'S ERASE PROTECTION SWITCH	Appears when the erase protection tab is set to "SAVE" while the Power Switch is set to "A" or "M" and the VIDEO/DSC Switch is set to "VIDEO". (☞ pg. 12)
⊗ HEAD CLEANING REQUIRED USE CLEANING CASSETTE	Appears if dirt is detected on the heads. Use an optional cleaning cassette. (☞ pg. 78)
💧 CONDENSATION, OPERATION PAUSED PLEASE WAIT	Appears if condensation occurs. When this indication is displayed, wait more than 1 hour until condensation disappears.
TAPE!	Appears if a tape is not loaded when the Recording Start/Stop Button or SNAPSHOT Button is pressed while the Power Switch is set to "A" or "M" and the VIDEO/DSC Switch is set to "VIDEO".
TAPE END	Appears when the tape ends during recording or playback. (☞ pg. 17)
DIFFERENT FORMATTED TAPE	Appears if a tape in another format is loaded.

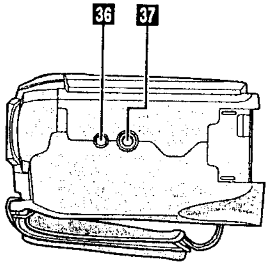
Indications	Function
SET DATE/TIME!	● Appears when the date/time is not set. (☞ pg. 11) ● Appears when the built-in clock battery runs out and the previously set date/time is erased. Consult your nearest JVC dealer for replacement.
LENS CAP	Appears for 5 seconds after power is turned on if the lens cap is attached.
A. DUB ERROR!	● Appears if Audio Dubbing is attempted on a blank portion of a tape. (☞ pg. 60)
A. DUB ERROR! <CANNOT DUB ON AN LP RECORDED TAPE> <CANNOT DUB ON A 16BIT RECORDING> <CHECK TAPE'S ERASE PROTECTION SWITCH>	● Appears if Audio Dubbing is attempted on a tape recorded in the LP mode. (☞ pg. 60) ● Appears if Audio Dubbing is attempted on a tape recorded in 16-bit audio. (☞ pg. 60) ● Appears if A. DUB (⏏) on the remote control is pressed when the erase protection tab is set to "SAVE". (☞ pg. 60)
INSERT ERROR!	● Appears if Insert Editing is attempted on a blank portion of a tape. (☞ pg. 61)
INSERT ERROR! <CANNOT EDIT ON AN LP RECORDED TAPE> <CHECK TAPE'S ERASE PROTECTION SWITCH>	● Appears if Insert Editing is attempted on a tape recorded in the LP mode. (☞ pg. 61) ● Appears if INSERT (▷) on the remote control is pressed when the erase protection tab is set to "SAVE". (☞ pg. 61)
MEMORY IS FULL	Appears when the built-in memory is full and shooting is not possible.
COPYING FAILED	● Appears if dubbing of copyguarded signals is attempted while this camcorder is being used as a recorder. ● Appears if the built-in memory is full when dubbing still images recorded on the tape to the built-in memory. (☞ pg. 49) ● Appears in the following cases when dubbing still images stored in the built-in memory to a tape: – when condensation occurs. – when no tape is loaded. – when the erase protection tab is set to "SAVE". – when a tape in another format is loaded. – when the tape ends. (☞ pg. 48)
NO IMAGES STORED	Appears if there are no images stored in the built-in memory when the Power Switch is set to "PLAY" and the VIDEO/DSC Switch is set to "DSC".
E01 — E06 UNIT IN SAFEGUARD MODE REMOVE AND REATTACH BATTERY	The error indications (E01 — E06) show what type of malfunction has occured. When an error indication appears, the camcorder turns off automatically. Remove the power supply (battery, etc.) and wait a few minutes for the indication to clear. When it does, you can resume using the camcorder. If the indication remains, consult your nearest JVC dealer.

INDEX Controls, Connectors And Indicators









Controls

① Monitor Open Button
[PUSH OPEN] ☞ pg. 16

② Diopter Adjustment Control ☞ pg. 10

③ Battery Release Button
[BATTERY RELEASE] ☞ pg. 9

④ • MENU Wheel [+, –, PUSH] ☞ pg. 24
• LCD Monitor BRIGHT
(Brightness) Control [+, –] ☞ pg. 16

⑤ Snapshot Button
[SNAPSHOT] ☞ pg. 18, 19, 49

⑥ • Power Zoom Lever [T/W] ☞ pg. 20
• Speaker Volume Control [VOL.] ☞ pg. 33

⑦ Snapshot Mode Button
[MODE] ☞ pg. 18, 19

⑧ OPEN/EJECT Switch ☞ pg. 12

⑨ Stop Button [■] ☞ pg. 33

⑩ • Rewind Button [◀◀] ☞ pg. 33
• BACKLIGHT Button ☞ pg. 31

⑪ Play/Pause Button [▶/❚❚] ☞ pg. 33

⑫ • Fast-Forward Button [▶▶] ☞ pg. 33
• FOCUS Button ☞ pg. 23

⑬ Power Switch
[A, M, PLAY, OFF] ☞ pg. 15

⑭ Recording Start/Stop Button ☞ pg. 16

⑮ Lock Button ☞ pg. 15

⑯ VIDEO/DSC Switch [VIDEO, DSC] ☞ pg. 15

⑰ Video Light Switch
[LIGHT OFF/AUTO/ON] ☞ pg. 22

Connectors

To connect cables to the following connectors ⓲ and ⓳, open the LCD monitor.

⓲ PC (DIGITAL PHOTO) Connector ☞ pg. 44

⓳ J Terminal/Edit Connector [JLIP (Joint Level Interface Protocol)/EDIT] ☞ pg. 55
- Connect the editing cable when performing Random Assemble Editing.
- Connect to a JLIP-compatible camcorder or VCR to control it from the computer using the provided Software.

⓴ DC Input Connector ☞ pg. 9

The connectors ㉑ to ㉓ are located beneath a cover.

㉑ Audio/Video Output Connector
[AV] ☞ pg. 42, 46, 55

㉒ Digital Video Connector [DV IN/OUT]
(i.link*) ☞ pg. 44, 45, 47
* i.Link refers to the IEEE1394-1995 industry specification and extensions thereof. The i logo is used for products compliant with the i.Link standard.

㉓ S-Video Output Connector [S] ... ☞ pg. 42, 46, 55

Indicators

[24] Tally Lamp ☞ pg. 16

[25] Side LED Indicator ☞ pg. 26

[26] Power Lamp ☞ pg. 16

Other Parts

[27] • Remote Sensor ☞ pg. 50
• Camera Sensor
Be careful not to cover this area, a sensor necessary for shooting is built-in here.

[28] Viewfinder ☞ pg. 10

[29] Video Light ☞ pg. 22

[30] Stereo Microphone ☞ pg. 60

[31] Shoulder Strap Eyelets ☞ pg. 10

[32] Grip Strap ☞ pg. 10

[33] Battery Pack Mount ☞ pg. 9

[34] LCD Monitor ☞ pg. 16, 17

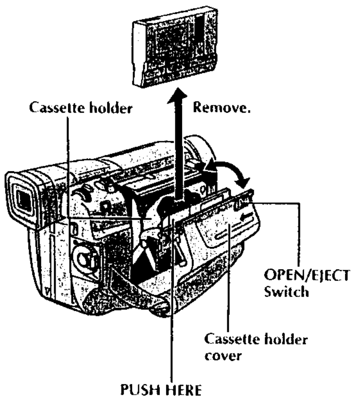
[35] Speaker ☞ pg. 33

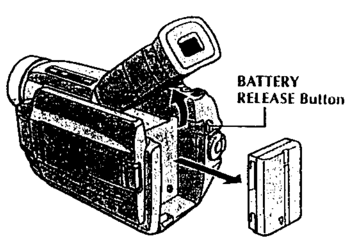
[36] Stud Hole ☞ pg. 10

[37] Tripod Mounting Socket ☞ pg. 10

After Use

1. Turn off the camcorder.
2. Slide and hold **OPEN/EJECT** in the direction of the arrow, then pull the cassette holder cover open until it locks. The cassette holder opens automatically. Remove the cassette.
3. Press "PUSH HERE" to close the cassette holder.
   - Once the cassette holder is closed, it recedes automatically. Wait until it recedes completely before closing the cassette holder cover.
4. Press **BATTERY RELEASE** and remove the battery pack.

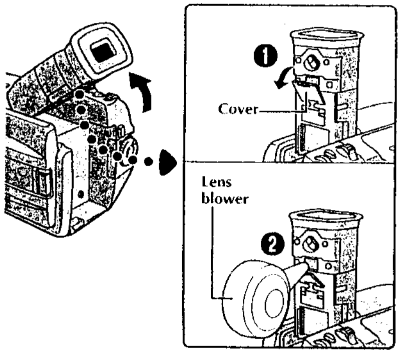




Cleaning The Camcorder

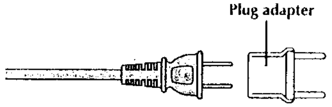
1. To clean the exterior, wipe gently with a soft cloth.
   Put the cloth in diluted mild soap and wring it well to wipe off heavy dirt. Then wipe again with a dry cloth.
2. Press **PUSH OPEN** and open the LCD monitor. Wipe gently with a soft cloth. Be careful not to damage the monitor. Close the LCD monitor.
3. To clean the lens, blow it with a blower brush, then wipe gently with lens cleaning paper.
4. To clean the viewfinder, raise it to the vertical position. Carefully open the cover on the bottom of the viewfinder ➊.
5. Insert a lens blower or soft cloth into the gap at the bottom of the viewfinder and clean the interior of the viewfinder with it ➋.
6. Close the cover. Tilt the viewfinder back to the horizontal position.

NOTES:
- *Avoid using strong cleaning agents such as benzine or alcohol.*
- *Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.*
- *Mold may form if the lens is left dirty.*
- *When using a cleaner or chemically treated cloth refer to the cautions of each product.*



When using the AC Power Adapter/Charger in areas other than the USA
- The provided AC Power Adapter/Charger features automatic voltage selection in the AC range from 110 V to 240 V.

USING HOUSEHOLD AC PLUG ADAPTER
In case of connecting the unit's power cord to an AC wall outlet other than American National Standard C73 series type use an AC plug adapter, called a "Siemens Plug", as shown.
For this AC plug adapter, consult your nearest JVC dealer.



Video Light

DANGER

- The video light can become extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm (11-13/16") between the video light and people or objects.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

General Battery Precautions

If the remote control is not functioning even if it is being operated correctly, the batteries are exhausted. Replace them with fresh ones.

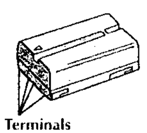
Use only the following batteries: AAA (R03) size x 2

Please make note of the following rules for battery use. When misused, the batteries can leak or explode.

1. When replacing batteries, refer to page 50.
2. **Do not** use any different size of batteries from those specified.
3. Be sure to install batteries in the correct direction.
4. **Do not** use rechargeable batteries.
5. **Do not** expose the batteries to excessive heat as they can leak or explode.
6. **Do not** dispose of the batteries in a fire.
7. Remove the batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

Battery Packs

The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:



1. To avoid hazards . . .
.... **do not** burn.
.... **do not** short-circuit the terminals. When transporting, make sure the provided battery cap is attached to the battery. If the battery cap is misplaced, carry the battery in a plastic bag.
.... **do not** modify or disassemble.
.... **do not** expose the battery to temperatures exceeding 60°C (140°F), as this may cause the battery to overheat, explode or catch fire.
.... use only specified chargers.

2. To prevent damage and prolong service life . . .
.... **do not** subject to unnecessary shock.
.... charge in an environment where temperatures are within the tolerances shown in the chart below. This is a chemical reaction type battery—cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
.... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
.... fully charge and then fully discharge the battery every 6 months when storing the battery pack over a long period time.
.... remove from charger or powered unit when not in use, as some machines use current even when switched off.

NOTES:
- *It is normal for the battery pack to be warm after charging, or after use.*
  Temperature Range Specifications
  Charging .... 10°C to 35°C (50°F to 95°F)
  Operation .... 0°C to 40°C (32°F to 104°F)
  Storage .... –10°C to 30°C (14°F to 86°F)
- *Recharging time is based on room temperature of 20°C (68°F).*
- *The lower the temperature, the longer recharging takes.*

Cassettes

To properly use and store your cassettes, be sure to read the following cautions:

1. During use . . .
.... make sure the cassette bears the Mini DV mark.
.... be aware that recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
.... make sure the cassette is positioned properly when inserting.

.... do not load and unload the cassette repeatedly without allowing the tape to run at all. This slackens the tape and can result in damage.

.... do not open the front tape cover. This exposes the tape to fingerprints and dust.

2. Store cassettes . . .

.... away from heaters or other heat sources.

.... out of direct sunlight.

.... where they won't be subject to unnecessary shock or vibration.

.... where they won't be exposed to strong magnetic fields (such as those generated by motors, transformers or magnets).

.... vertically, in their original cases.

LCD Monitor

1. To prevent damage to the LCD monitor, DO NOT . . .

.... push it strongly or apply any shocks.

.... place the camcorder with the LCD monitor on the bottom.

2. To prolong service life . . .

.... avoid rubbing it with coarse cloth.

3. Be aware of the following phenomena for LCD monitor use. These are not malfunctions:

- While using the camcorder, the surface around the LCD monitor and/or the back of the LCD monitor may heat up.
- If you leave power on for a long time, the surface around the LCD monitor becomes hot.

Main Unit

1. For safety, DO NOT . . .

.... open the camcorder's chassis.

.... disassemble or modify the unit.

.... short-circuit the terminals of the battery pack. Keep it away from metallic objects when not in use.

.... allow inflammables, water or metallic objects to enter the unit.

.... remove the battery pack or disconnect the power supply while the power is on.

.... leave the battery pack attached when the camcorder is not in use.

2. Avoid using the unit . . .

.... in places subject to excessive humidity or dust.

.... in places subject to soot or steam such as near a cooking stove.

.... in places subject to excessive shock or vibration.

.... near a television set.

.... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).

.... in places subject to extremely high (over 40°C or 104°F) or extremely low (under 0°C or 32°F) temperatures.

3. DO NOT leave the unit . . .

.... in places of over 50°C (122°F).

.... in places where humidity is extremely low (below 35%) or extremely high (above 80%).

.... in direct sunlight.

.... in a closed car in summer.

.... near a heater.

4. To protect the unit, DO NOT . . .

.... allow it to become wet.

.... drop the unit or strike it against hard objects.

.... subject it to shock or excessive vibration during transportation.

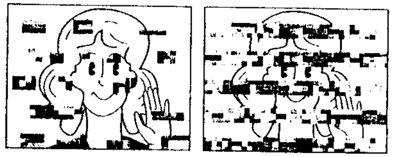
.... keep the lens directed at extremely bright objects for long periods.

.... expose the lens to direct sunlight.

.... carry it by holding the LCD monitor or the viewfinder.

.... swing it excessively when using the shoulder strap or the grip.

5. Dirty heads can cause the following problems:



- No picture during playback.
- Blocks of noise appear during playback.
- During recording, the Head Clog Warning indicator "⊗" appears.

In such cases, use an optional cleaning cassette. Insert it and play back. If the cassette is used more than once consecutively, damage to the video heads may result. After the camcorder plays back for about 20 seconds, it stops automatically. Also refer to the cleaning cassette's instructions.

If, after using the cleaning cassette, the problems still exist, consult your nearest JVC dealer.

Mechanical moving parts used to move the video heads and video tape tend to become dirty and worn out over time. In order to maintain a clear picture at all times, periodic check-ups are recommended after using the unit for about 1,000 hours. For periodic check-ups please consult your nearest JVC dealer.

How To Handle A CD-ROM

- Take care not to soil or scratch the mirror surface (opposite to the printed surface). Do not write anything or put a sticker on either the front or back surface. If the CD-ROM gets dirty, gently wipe it with a soft cloth outward from the center hole using a circular motion.
- Do not use conventional disc cleaners or cleaning spray.
- Do not bend the CD-ROM or touch its mirror surface.
- Do not store your CD-ROM in a dusty, hot or humid environment. Keep it away from direct sunlight.

About moisture condensation . . .

- You have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass' outer surface. This same phenomenon occurs on the head drum of a camcorder when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the camcorder itself.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

The camcorder is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.) and wait a few minutes and then re-connect it and proceed as usual from the beginning.

Declaration of Conformity

Model Number : GR-DVL805U/505U
Trade Name : JVC
Responsible party : JVC AMERICAS CORP.
Address : 1700 Valley Road Wayne, N. J. 07470
Telephone Number : 973-315-5000

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Change or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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Camcorder

For General

Power supply : DC 6.3 V ⎓ (Using AC Power Adapter/Charger)
DC 7.2 V ⎓ (Using battery pack)

Power consumption
LCD monitor off, viewfinder on : Approx. 4.3 W
LCD monitor on, viewfinder off : Approx. 5.3 W
Video light : Approx. 3.5 W

Dimensions (W x H x D) : 80 mm x 96 mm x 159 mm (3-3/16" x 3-13/16" x 6-5/16")
(with the LCD monitor closed and the viewfinder pushed down)

Weight : Approx. 580 g (1.3 lbs)
Operating temperature : 0°C to 40°C (32°F to 104°F)
Operating humidity : 35% to 80%
Storage temperature : –20°C to 50°C (–4°F to 122°F)
Pickup : 1/4" CCD
Lens : F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter : ø37 mm

LCD monitor
GR-DVL805 : 3.5" diagonally measured, LCD panel/TFT active matrix system
GR-DVL505 : 3.0" diagonally measured, LCD panel/TFT active matrix system

Viewfinder
GR-DVL805 : Electronic viewfinder with 0.44" color LCD
GR-DVL505 : Electronic viewfinder with 0.24" black/white LCD

Speaker : Monaural

For Digital Video Camera

Format : DV format (SD mode)
Signal format : NTSC standard
Recording/Playback format : Video: Digital component recording
: Audio: PCM digital recording, 32 kHz 4-channel (12-bit),
48 kHz 2-channel (16-bit)
Cassette : Mini DV cassette
Tape speed : SP: 18.8 mm/s
LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette) : SP: 80 min.
LP: 120 min.

For Digital Still Camera

Storage media : Built-in flash memory, 2 Mbyte
Compression system : JPEG (compatible)
File size : VGA: 640 x 480 pixels
Picture quality : 2 modes (FINE/STANDARD)
Approximate number of storable images
FINE : 30
STANDARD : 60

For Connectors

S : Y : 1 V (p-p), 75 Ω, analog output
C : 0.29 V (p-p), 75 Ω, analog output

AV
Video output : 1 V (p-p), 75 Ω, analog
Audio output : 300 mV (rms), 1 kΩ, analog, stereo

DV
Input/output : 4-pin, IEEE 1394 compliant

PC (DIGITAL PHOTO)
Digital still output : ø2.5 mm, 3-pole

JLIP/EDIT : ø3.5 mm, 4-pole

AC Power Adapter/Charger AA-V40U

Power requirement
U.S.A. and Canada : AC 120 V∼, 60 Hz
Other countries : AC 110 V to 240 V∼, 50 Hz/60 Hz

Power consumption : 23 W

Output
Charge : DC 7.2 V ⎓, 1.2 A
VTR : DC 6.3 V ⎓, 1.8 A

Dimensions (W x H x D) : 68 mm x 38 mm x 110 mm (2-11/16" x 1-1/2" x 4-3/8")
Weight : Approx. 250 g (0.56 lbs)

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

SECTION 1
DISASSEMBLY

1.1 BEFORE ASSEMBLY AND DISASSEMBLY

1.1.1 Precautions

1. Be sure to remove the power supply unit prior to mounting and soldering of parts.
2. When removing a component part that needs to disconnect the connector and to remove the screw for removing itself, first disconnect the connecting wire from the connector and then remove the screw beforehand.
3. When connecting and disconnecting the connectors, be careful not to damage the wire.
4. When replacing chip parts (especially IC parts), desolder completely first (to prevent peeling of the pattern).
5. Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.078N·m (0.8kgf·cm).

1.1.2 Assembly and disassembly

STEP	PART	Fig No.	POINT	NOTE
①	TOP COVER	Fig.1-3-2	2(S①a), (S①b)	-
②	FRONT ASSY (Inc. MIC, DC LIGHT)		(S②a), (S②b), (S②c), (S②d) (L②a), 2(L②b) ☆CN Ⓐ, Ⓑ	NOTE ②a NOTE ②b NOTE ②c NOTE ②d

(1) (2) (3) (4) (5)

(1) Indicate the disassembly steps. When assembling, perform in the reverse order of these steps. This number corresponds to the number in the disassembly diagram.

(2) Indicates the name of disassembly/assembly parts.

(3) Indicates the number in the disassembly diagram.

(4) Indicates parts and points such as screws, washers, springs which must be removed during disassembly/assembly.
S = Screw
Lock (L), soldering (SD), shield, connector, etc.
P = Spring
W = Washer
☆CN = Connector

[Example] 2(S①a): Remove the two screws (S①a) fastening the part ①.

(5) Precautions on disassembly/assembly.

1.1.3 Destination of connectors

Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*
↔ : Wire
⇔ : Flat wire
⬌ : Board to Board connector

[Example]

CONN. No.	CONNECTOR				Pin No.
Ⓐ	MAIN	CN104	↔	DC LIGHT	2

1.1.4 Disconnection of Connectors (Wires)

Connector
Pull both ends of the connector in the arrow direction, remove the lock and disconnect the flat wire.

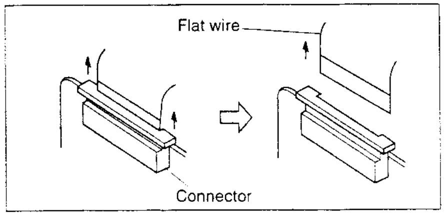


Fig. 1-1-1 Connector 1

Extend the locks in the direction of the arrow for unlocking and then pull out the wire. After removing the wire, immediately restore the locks to their original positions because the locks are apt to come off the connector.

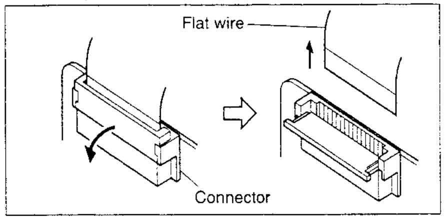


Fig. 1-1-2 Connector 2

B-B connector
Pull the board by both the sides in the direction of the arrow for disconnecting the B-B connector

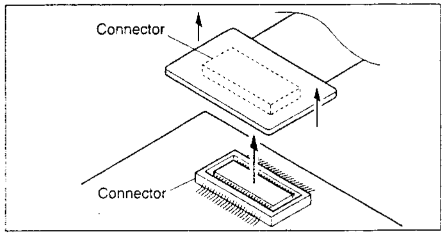


Fig. 1-1-3 Connector 3

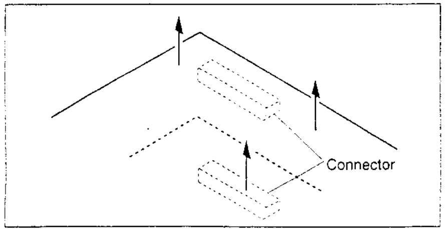


Fig. 1-1-4 Connector 4

1.2 TOOLS AND EQUIPMENTS REQUIRED FOR ADJUSTMENTS

1.2.1 Tools required for adjustments

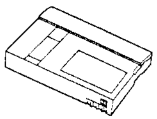
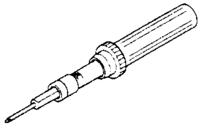
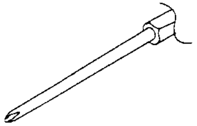
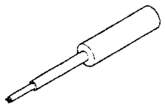
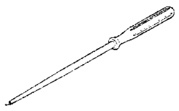
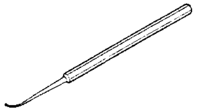
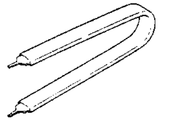
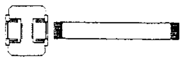
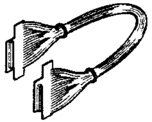
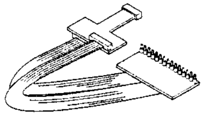
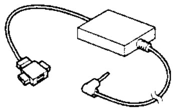
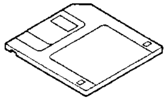
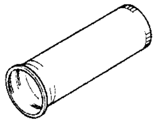
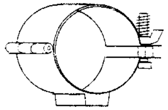
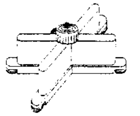
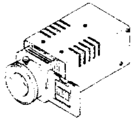
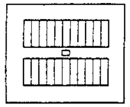
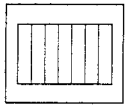
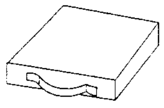
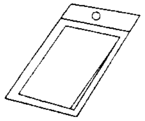
1 Alignment tape MC-1	2 Torque driver YTU94088	3 Bit YTU94088-003	4 Guide driver YTU94148A
			
5 Adjustment driver YTU94028	6 Chip IC replacement jig PTS40844-2	7 Connector extractor YTU94036A	8 Patch cord YTU94074-24/YTU94077-24
			
9 Patch cord YTU94126A-30	10 Jig connector cable YTU93082E	11 PC cable QAM0099-002	12 Service support system YTU94057-46
			
13 INF adjustment lens YTU92001B	14 INF adjustment lens holder YTU94087	15 Camera stand YTU93079	16 Light box unit YTU93096A
			
17 Gray scale chart YTU94133A	18 Color bar chart YTU94133C	19 Soldering kit YTU96016B	20 Cleaning cloth KSMM-01
			

Table 1-2-1

1. Alignment tape
   To be used for check and adjustment of interchangeability of the mechanism.
2. Torque driver
   Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.
3. Bit
   This bit is slightly longer than those set in conventional torque drivers.
4. Guide driver
   To be used to turn the guide roller to adjustment of the linarity of playback envelope.
5. Adjustment driver
   To be used for adjustment.
6. Chip IC replacement jig
   To be used for adjustment of the camera system.
7. Connector extractor
   To be used to release the connector.

8,9. Patch cord
To be used to connect electrical parts, P.C. boards, etc. for servicing.

Note: *The patch cord that is newly required for repair service. Besides this patch cord, existing patch cords are also required for service.*

10. Jig connector cable
    Connected to CN105 of the main board and used for electrical adjustment, etc.
11. PC cable
    To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.
12. Service support system
    To be used for adjustment with a personal computer.
13. INF adjustment lens
    To be used for adjustment of the camera system.
14. INF adjustment lens holder
    To be used together with the camera stand for operating the VideoMovie in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring.
15. Camera stand
    To be used together with the INF adjustment lens holder.
16. Light box unit
    To be used for adjustment of the camera system.
17. Gray scale chart (for Light box unit)
    To be used for adjustment of the camera system.
18. Color bar chart (for Light box unit)
    To be used for adjustment of the camera system.
19. Soldering kit
    Thin head is made so that it can be inserted into small spaces.
20. Cleaning cloth
    Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

1.3 DISASSEMBLY/ASSEMBLY OF CABINET PARTS AND BOARD ASSEMBLY

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and board assembly in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order.

① Top cover
② Front assy (Inc. MIC, DC LIGHT)
③ U.case assy (Inc. Moni. assy, VF assy)
④ Rear cover
⑤ OP block assy
⑥ L. case assy
⑦ Mechanism assy/Board assy
⑧ Monitor assy
⑨ E VF assy
⑩ Monitor board assy
⑪ DSC board assy
⑫ Jack board assy
⑬ Junction board assy
⑭ Main board assy
⑮ Mechanism assy

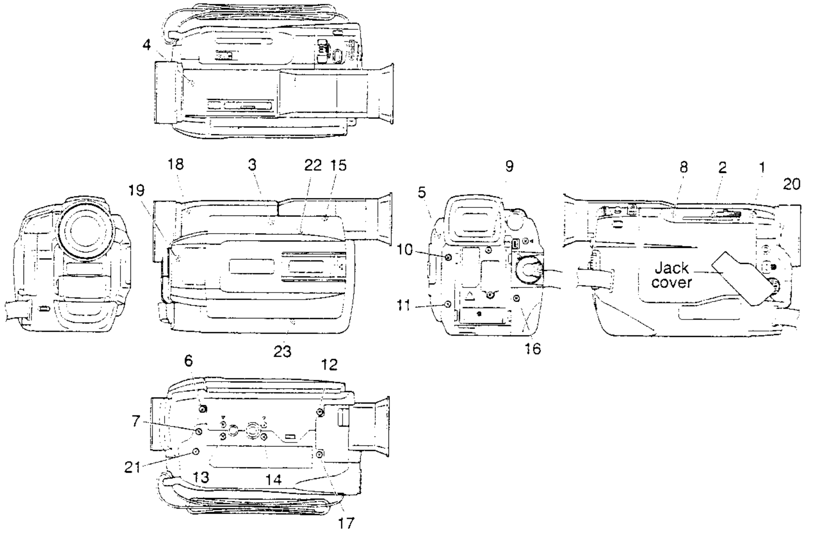


Fig. 1-3-1

1.3.2 Disassembly method (I)

Note: *For the position of the screw, refer to Fig. 1-3-1.*

STEP No.	PART	Fig No.	POINT	NOTE
①	TOP COVER	Fig.1-3-2	2(S①a), (S①b), (L①)	–
②	FRONT ASSY (Inc. MIC, DC LIGHT)		(S②a), (S②b), (S②c), (S②d) (L②a), 2(L②b) ☆CN Ⓐ, Ⓑ	NOTE②a NOTE②b NOTE②c NOTE②d
③	U. CASE ASSY (Inc. MONITOR UNIT ASSY / VF ASSY)		(S③a), (S③b), 2(S③c) (S③d), 2(S③e), (L③) ☆CN Ⓒ	NOTE③a NOTE③b NOTE③c
④	REAR COVER		3(S④) ☆CN Ⓓ	NOTE④
⑤	OP BLOCK ASSY		2(S⑤) BKT (OP) ☆CN Ⓔ, Ⓕ	–
⑥	L. CASE ASSY		(S⑥a), (S⑥b), 2(S⑥c) ☆CN Ⓖ JACK COVER	NOTE⑥
⑦	MECHANISM ASSY /MAIN BOARD ASSY etc.		–	NOTE⑦

Table 1-3-2

CONN. No.	CONNECTOR					Pin No.
Ⓐ	MAIN	CN104	⟷	DC LIGHT		2
Ⓑ	MAIN	CN106	⟷	MIC		3
Ⓒ	MAIN	CN101	⟺	MONITOR	CN7601	32
Ⓓ	REAR	CN551	⟷	MAIN	CN103	11
Ⓔ	MAIN	CN107	⟺	CCD		18
Ⓕ	MAIN	CN108	⟺	OP BLOCK		24
Ⓖ	MAIN	CN114	⟺	ZOOM OPE		15

Table 1-3-3

Note②a: *Pay heed to the screws to remove.*

Note②b: *Pay heed to the screws to remove.*

Note②c: *For removing the DC light, disengage it from the internal pawls in both sides.*

Note②d: *For removing the microphone, remove the screw from the inside and draw out the microphone.*
If the seat is stuck to the inside, remove it beforehand.

Note③a: *Pay heed to the screws to remove.*

Note③b: *Pay heed to the part not to damage it.*

Note③c: *For disassembling the ⑧ monitor assembly and ⑨VF assembly , refer to the section 1.3.3.*

Note④: *When assembling, pay careful attention to the wire not to damage it.*

Note⑥: *Remove the cover and the screws.*

Note⑦: *For disassembling the mechanism assembly and board assemblies, refer to the section 1.3.4.*

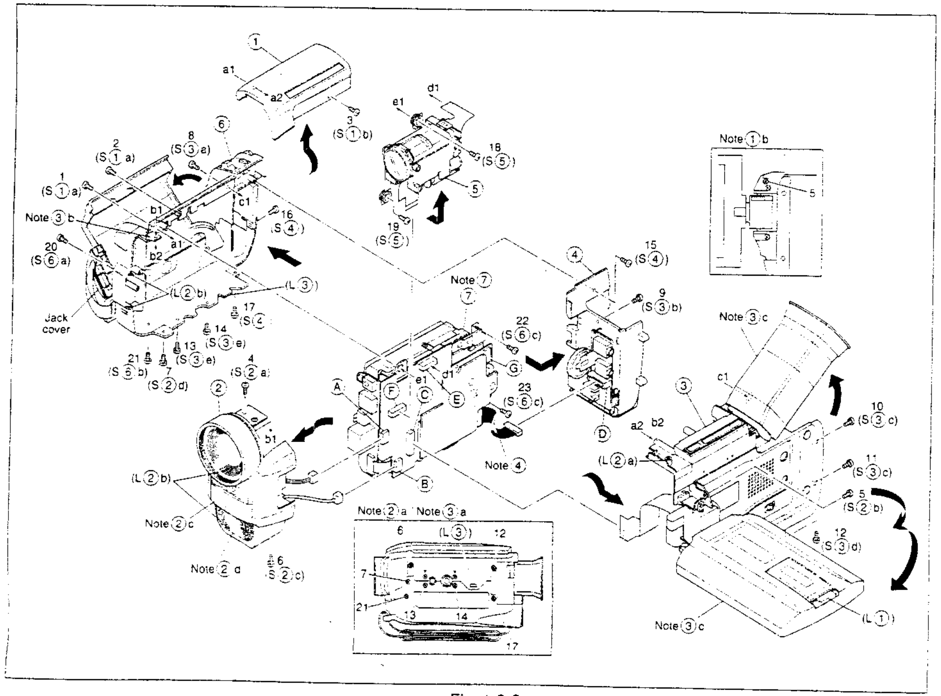

①
a1
a2
3
(S①b)
e1
d1
18
(S⑤)
⑤
19
(S⑤)
2
(S①a)
8
(S③e)
⑥
1
(S①a)
Note③b
20
(S⑥a)
b1
c1
16
(S④)
a1
b2
(L②b)
(L③)
Jack cover
17
(S②)
14
(S③e)
13
21
(S③b)
7
(S②d)
(S③e)
4
(S②a)
②
b1
(L②b)
Note②c
Note②d
6
(S②c)
Note⑦
⑦
Ⓐ
Ⓕ
Ⓒ
e1
d1
Ⓔ
Ⓖ
22
(S⑥c)
23
(S⑥c)
Ⓓ
Note④
Ⓑ
④
15
(S④)
9
(S③b)
Note①b
5
Note③c
③
c1
a2
b2
(L②a)
10
(S③c)
11
(S③c)
5
(S②b)
12
(S③d)
Note③c
(L①)
Note②a Note③a
6
(L③)
12
7
21
13
14
17

Fig. 1-3-2

1.3.3 Disassembly method (II)

STEP No.	PART	Fig No.	POINT	NOTE
⑧	MONITOR ASSY	Fig.1-3-3	2(S⑧), (L⑧) ☆CN Ⓗ	NOTE⑧
⑨	E VF ASSY		(S⑨a), 2(S⑨b) ☆CN Ⓙ	NOTE⑨a NOTE⑨b
⑩	MONITOR BOARD ASSY		(S⑩a), (S⑩b), 2(S⑩c) SPEAKER, PLATE (SPK) KNOB (DC LIGHT/DSC) ☆CN Ⓚ	NOTE⑩a NOTE⑩b

Table 1-3-4

CONN. No.	CONNECTOR					Pin No.
Ⓗ	MONITOR	CN7604	⟺	LCD BL	CN7501	33/32
Ⓙ	MONITOR	CN7603	⟺	C-VF	CN7551	20
	MONITOR	CN7602	⟺	B/W VF	CN7201	20
Ⓚ	MONITOR	CN7605	⟷	SPEAKER		2

Table 1-3-5

Note⑧: *Carefully proceed in the work not to damage the switch.*

Note⑨a: *When disassembling, raise the E. VF assembly to the utmost position for disconnecting the FPC and removing the screw.*

Note⑨b: *For removing the E. VF assembly, raise it furthermore and remove it while widening the opening between the E. VF assembly and operation switch as the tapped holes No. 4, 5 and holes of the hinge assembly are shifted off each other.*

Pay heed to the FPC wire and parts not to break or damage anything through the work.

Note⑩a: *When assembling, check to see if the speaker is properly set in the frame and tightly fastened with the plate.*

Note⑩b: *When disassembling, be careful not to lose any part.*

When assembling, pay careful attention to the position of the switch and knob, and check to see if the switch slides smoothly after assembly.

KNOB (COLOR): DC LIGHT (Gray)/DSC (Violet)

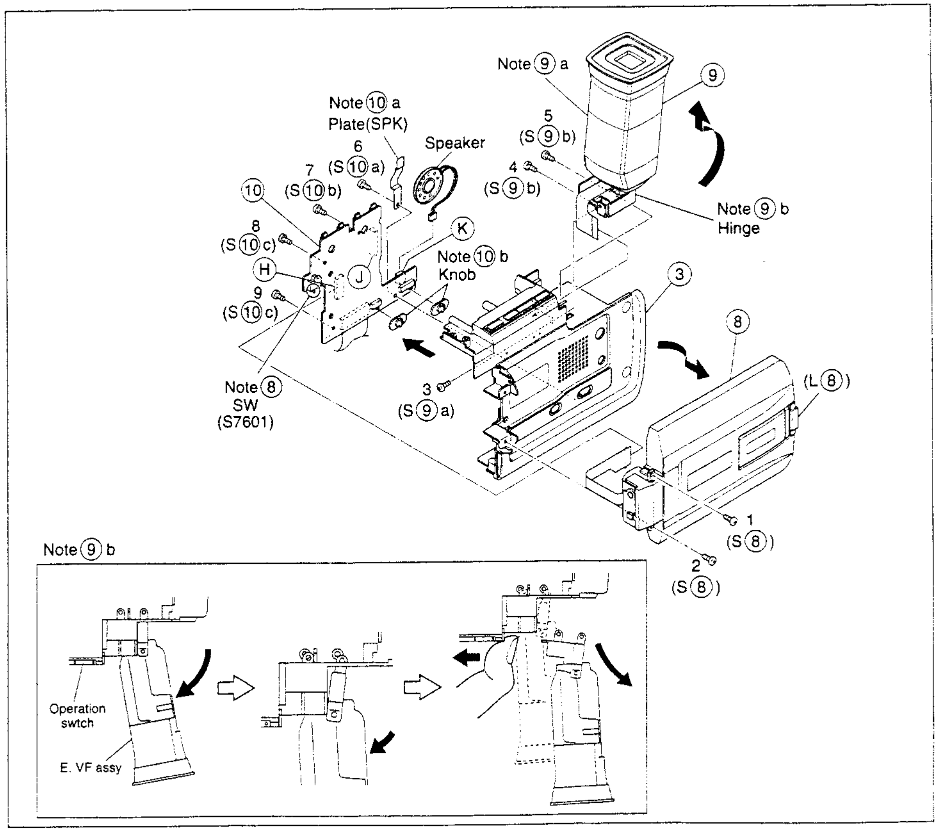

Note⑨a
⑨
Note⑩a
Plate(SPK)
6
Speaker
5
(S⑨b)
7 (S⑩a)
4
(S⑨b)
⑩
(S⑩b)
8
(S⑩c)
Ⓚ
Note⑨b
Hinge
Ⓗ
Note⑩b
Knob
Ⓙ
9
(S⑩c)
③
⑧
(L⑧)
Note⑧
SW
(S7601)
3
(S⑨a)
1
(S⑧)
2
(S⑧)
Note⑨b
Operation swtch
E. VF assy

Fig. 1-3-3

1.3.4 Disassembly method (Ⅲ)

STEP No.	PART	Fig No.	POINT	NOTE
⑪	DSC BOARD ASSY	Fig.1-3-4	2(S⑪) ☆CN Ⓛ	–
⑫	JACK BOARD ASSY		2(S⑫) ☆CN Ⓜ	–
⑬	JUNC. BOARD ASSY		(S⑬a), (S⑬b) ☆CN Ⓝ, Ⓞ, Ⓟ, Ⓠ	NOTE⑬
⑭	MAIN BOARD ASSY		(S⑭a), 2(S⑭b), (L⑭) SHIELD CASE ☆CN Ⓡ, Ⓢ, Ⓣ	–
⑮	MECHANISM ASSY		2(S⑮), 2(L⑮) HOLDER(M) ASSY	–

Table 1-3-6

CONN. No.	CONNECTOR					Pin No.
Ⓛ	MAIN	CN109	━	DSC	CN801	30
Ⓜ	JACK	CN501	⟺	MAIN	CN102	22
Ⓝ	MAIN	CN113	⟺	JUNCTION	CN571	33
Ⓞ	JUNCTION	CN574	⟺	LOADING MOTOR		6
Ⓟ	JUNCTION	CN573	⟺	DRUM MOTOR		11
Ⓠ	JUNCTION	CN572	⟺	SENSOR		15
Ⓡ	MAIN	CN110	⟺	HEAD		8
Ⓢ	MAIN	CN112	⟺	CAPSTAN MOTOR		18
Ⓣ	MAIN	CN111	⟺	ROTARY ENCODER		6

Table 1-3-7

Note⑬: *When removing, first disconnect the connectors Ⓝ, Ⓞ and Ⓟ, next remove the screws. Then, open the board assembly and disconnect the connector Ⓠ on the back side.*

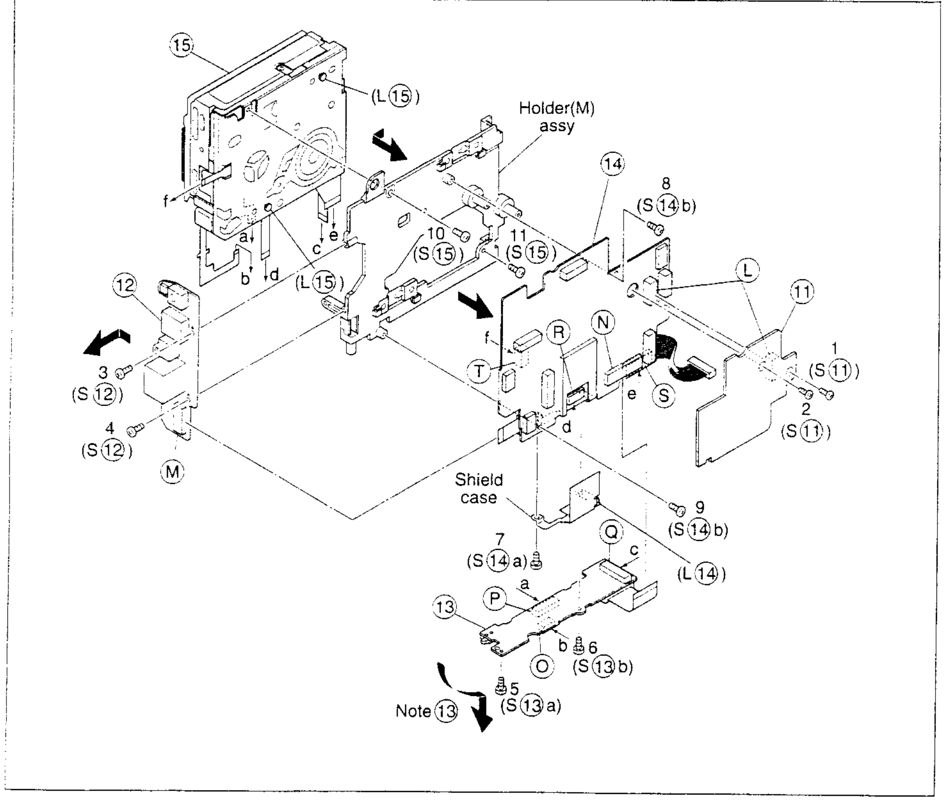

⑮
(L⑮)
Holder(M) assy
⑭
8
(S⑭b)
10
(S⑮)
11
(S⑮)
f
a
e
c
b
d
(L⑮)
⑫
Ⓛ
⑪
Ⓡ
Ⓝ
Ⓣ
Ⓢ
1
(S⑪)
2
(S⑪)
3
(S⑫)
4
(S⑫)
Ⓜ
Shield case
9
(S⑭b)
7
(S⑭a)
Ⓠ
(L⑭)
Ⓟ
⑬
Ⓞ
6
(S⑬b)
5
(S⑬a)
Note⑬

Fig. 1-3-4

1.4 ④DISASSEMBLY/ASSEMBLY OF MONITOR ASSEMBLY

Note: *The shape of the monitor assembly varies depending on the size of the LCD screen.*

1.4.1 Disassembly/assembly of monitor assembly (for 3"/3.5"-type LCD)

Note: *Be careful not to soil or scratch the monitor screen through the disassembly/assembly work.*

1. Remove the four screws 1 to 4 in numerical order. While disengaging the six hooks (L④a to L④f) in alphabetical order, open the monitor cover assembly and remove it after disconnecting the FPC from the connector ⓐ.

Note④a: *When removing the monitor cover assembly, be careful not to damage the FPC and connector.*

2. Unlock the connector ⓑ and then disconnect the FPC while lifting the hinge assembly upwards to remove it together with the FPC.

Note④b: *For disconnecting the FPC, unlock the connector first and then lift the hinge assembly upwards. Accordingly, the FPC is disconnected together with the hinge assembly.*

3. Disconnect the wire and FPC from the two connectors ⓒ, ⓓ, and then remove the MONITOR BL board assembly, holder (PWB) and backlight together.
4. Remove the LCD module while disengaging it from the four hooks (L4g to L4k).

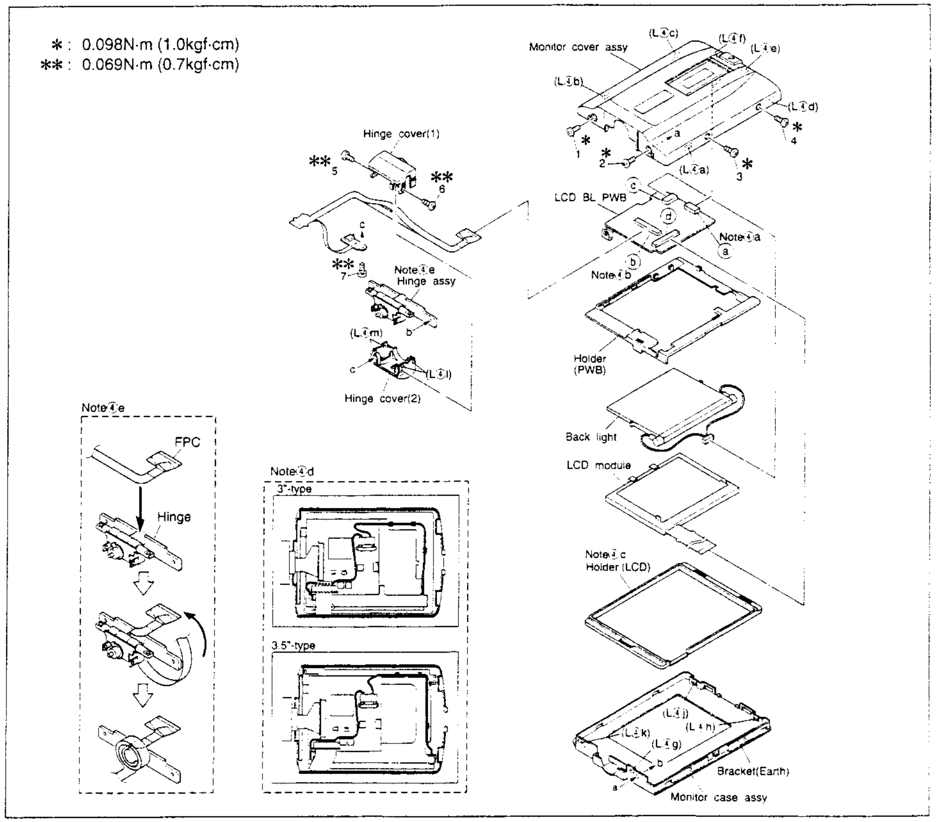
Note④c: *The holder (LCD) is used for the 3"-type monitor assembly only.*

1.4.2 Disassembly/assembly of hinge assembly (for 3"/3.5"-type LCD)

1. Remove the one screw 5 first, and then remove the two screws 6, 7 after removing the SW board assembly. While disengaging the four hooks (L④j, L④k) in both sides, remove the hinge cover (1) and (2).
2. Disconnect the FPC from the hinge assembly.

Note④d: *When disassembling/assembling the hinge assembly, pay careful attention to every part not to damage anything.*

Note④e: *When connecting the FPC, arrange the FPC wire by winding it around the shaft (hinge pin) of the hinge assembly by two and a half turns while paying heed to the orientation of the hinge assembly and FPC.*


* : 0.098N·m (1.0kgf·cm)
** : 0.069N·m (0.7kgf·cm)

Monitor cover assy
(L④c)
(L④f)
(L④e)
(L④b)
(L④d)
1
2
3
4
(L④a)
LCD BL PWB
ⓒ
ⓓ
Note④a
ⓐ
ⓑ
Note④b
Holder (PWB)
Back light
LCD module
Note④c
Holder (LCD)
(L④j)
(L④h)
(L④k)
(L④g)
Bracket(Earth)
Monitor case assy
Hinge cover(1)
5
6
7
Note④e
Hinge assy
(L④m)
(L④i)
Hinge cover(2)
Note④e
FPC
Hinge
Note④d
3"-type
3.5"-type

Fig. 1-4-1

1.5 ⑤E. VF ASSEMBLY

Note: *The shape of the E. VF assembly varies by the type of the viewfinder (B/W, color VF).*

For the B/W VF, refer to Fig. 1-5-1.

1.5.1 Disassembly/assembly of E. VF assembly (for B/W VF)

Note: *Place the E. VF assembly with the VF case (upper) assembly down through the disassembly/assembly work.*

1. First remove the two screws (1, 2), next remove the eyepiece assembly.
2. Remove the two screws (3, 4), and disengage the two hooks (L⑤a, L⑤b) in both sides while extending the VF case (upper) assembly by one side. Accordingly, the VF case (lower) can be removed.

Note⑤a: *When reassembling, install the VF case (lower) paying careful attention to the FPC so that it is not caught in the hinge assembly of the VF case (lower) when the hinge assembly is folded down.*

Note⑤b: *Don't remove the hinge assembly fastened to the VF case (lower) with the screws unreasonably except for replacement. For removing the hinge assembly for replacement, remove the two screws (6, 7). When installing a new hinge assembly, be sure not to use the screws that were once removed but to use new screws to fasten it.*

3. Remove the one screw (5) and remove the board assembly, LCD module and holder together.

Note⑤c: *When reassembling, set the holder in the groove and fasten the board assembly with the screw while arranging the FPC carefully.*

4. Disconnect the FPC and wire, and then remove the LCD module.
5. Remove the holder while disengaging it from the two hooks (L⑤c, L⑤d).

Note⑤d: *When reassembling, pay careful attention to the vertical orientation.*

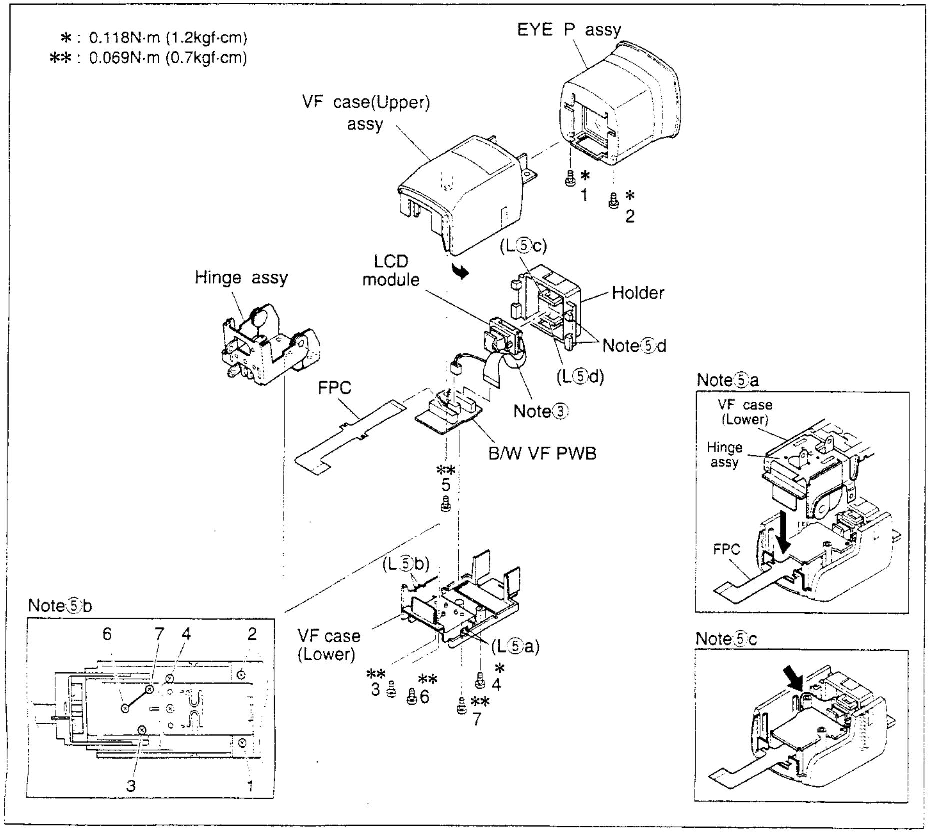

*: 0.118N·m (1.2kgf·cm)
**: 0.069N·m (0.7kgf·cm)
EYE P assy
VF case(Upper) assy
*
1
*
2
(L⑤c)
LCD module
Holder
Hinge assy
Note⑤d
(L⑤d)
FPC
Note③
B/W VF PWB
**
5
(L⑤b)
VF case (Lower)
(L⑤a)
**
3
**
6
*
4
**
7
Note⑤a
VF case (Lower)
Hinge assy
FPC
Note⑤b
6
7
4
2
3
1
Note⑤c

Fig. 1-5-1

1.5.2 Disassembly/assembly of E. VF assembly (for color VF)

Note: *Place the E. VF assembly with the VF case (upper) assembly down through the disassembly/assembly work.*

1. Remove the two screws (1, 2) and then remove the eyepiece assembly.
2. While extending the VF case (upper) by one side, disengage the two hooks (L⑤a, L⑤b) and remove the VF case (lower).

Note⑤e: *When reassembling, first set the LCD assembly and FPC in the VF case (upper), next install the VF case (lower) paying careful attention to the FPC so that it is not caught in the hinge assembly of the VF case (lower) when the hinge assembly is folded down.*

Note⑤f: *Don't remove the hinge assembly fastened to the VF case (lower) with the screws unreasonably except for replacement. For removing the hinge assembly for replacement, remove the two screws (6, 7). When installing a new hinge assembly, be sure not to use the screws that were once removed but to use new screws to fasten it.*

3. Remove the LCD assembly and FPC assembly.

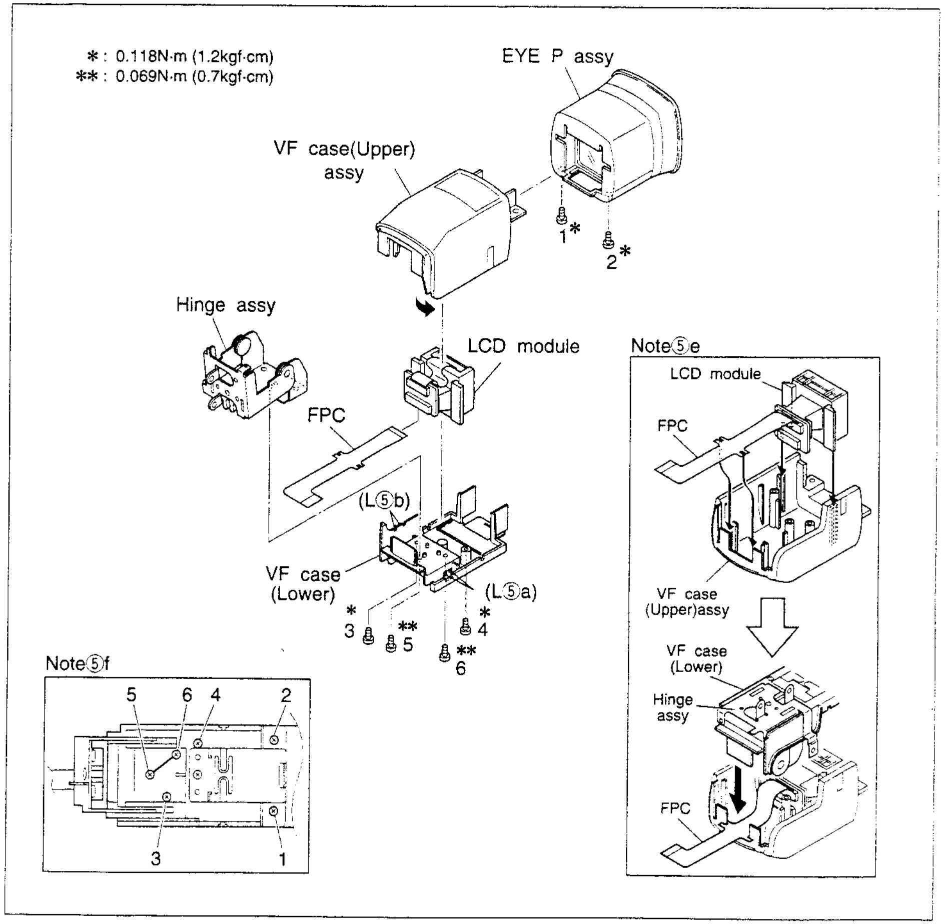

*: 0.118N·m (1.2kgf·cm)
**: 0.069N·m (0.7kgf·cm)
EYE P assy
VF case(Upper) assy
1*
2*
Hinge assy
LCD module
FPC
(L⑤b)
VF case (Lower)
(L⑤a)
*
3
**
5
*
4
**
6
Note⑤e
LCD module
FPC
VF case (Upper)assy
VF case (Lower)
Hinge assy
FPC
Note⑤f
5
6
4
2
3
1

Fig. 1-5-2

1.6 DISASSEMBLY OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

1.6.1 Precautions

1. Through the disassembly/assembly work, carefully handle the CCD image sensor, optical LPF, lens, and so on paying the closest attention to the surface of each part so as to prevent it from getting soiled, dusty or scratched. If some of them gets soiled with fingerprints, etc., wipe it out with silicone paper, clean chamois, or super cleaning cloth recommended by JVC, or the like.
2. The new CCD image sensor is occasionally shipped from the factory as a protection seal is applied onto its transparent glass. If so, leave the protection seal as it is and remove it just before installing the CCD image sensor into the OP block assembly.
3. The orientation of the optical LPF is an important factor for installation. If there is some marking on the LPF, be sure to note it down before removing and to reassemble it very carefully as it was referring to the marking.

1.6.2 How to remove CCD board assembly and CCD base assembly

1. Unsolder the CCD board assembly by the 14 points (SD1) and then remove it.
2. Remove the two screws (1, 2) and remove the CCD base assembly.

Note⑥a: *When removing the CCD base assembly, pay heed to the CCD image sensor because the spacer rubber and optical LPF are occasionally removed together with the CCD image sensor.*

Note⑥b: *When replacing the CCD image sensor, don't replace it individually but replace the CCD base assembly in whole with a new one.*

1.6.3 How to assemble CCD base assembly and CCD board assembly

1. Install the optical LPF with the spacer rubber attached to its CCD side in the OP block assembly.

Note⑥c: *Pay careful attention to the orientation of the LPF.*

2. Set the CCD base assembly with careful attention to the spacer rubber not to come off the right position, and fasten them together with the two screws (1, 2).
3. Set the CCD board assembly in the CCD base assembly, and then solder it by the 14 points (SD1).

Note⑥d: *When soldering the FPC wire to the terminal after replacement of the focus motor or zoom motor, be sure to keep the tip of a soldering iron approximately 1 mm apart from the terminal.*

Note⑥e: *The iris motor unit includes the FPC assembly and two sensors.*

1.6.4 Replacement of service parts

Service parts to be supplied for the OP block assembly are as follows.

When replacing a part, be very careful not to get the FPC wire broken or damaged by overheating in soldering.

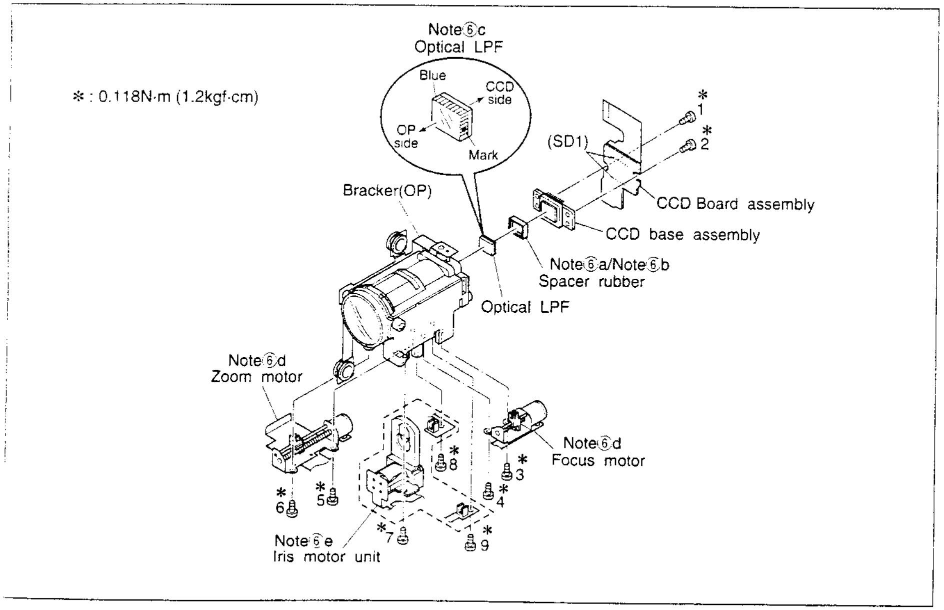

✻ : 0.118N·m (1.2kgf·cm)
Note⑥c
Optical LPF
Blue
CCD side
OP side
Mark
(SD1)
✻1
✻2
Bracket(OP)
CCD Board assembly
CCD base assembly
Note⑥a/Note⑥b
Spacer rubber
Optical LPF
Note⑥d
Zoom motor
Note⑥d
Focus motor
✻6
✻5
✻8
✻3
✻4
✻7
✻9
Note⑥e
Iris motor unit

Fig. 1-6-1

1.7 CONNECTION OF CONNECTORS

<PATCH CORDS>

Note: *The patch cord No. ② is a new implement, which is to be used as a requisite for servicing this model as well as existing patch cords.*

	Connection					Pin No.	Parts Number
①	MAIN	CN107	↔	CCD		18	YTU94074-18 /YTU94077-18
②	MAIN	CN108	↔	OP BLOCK		24	YTU94074-24 /YTU94077-24
③	MAIN	CN114	↔	ZOOM OPE		15	YTU94074-15 /YTU94077-15
④	MONITOR	CN7604	↔	LCD BL	CN7501	33/32	YTU94129A-33 /YTU94109-33
⑤	JACK	CN501	↔	MAIN	CN102	22	YTU94074-22 /YTU94077-22
⑥	MAIN	CN111	↔	ROTARY ENCODER		6	YTU94074-6 /YTU94077-6
⑦	MAIN	CN109	↔	DSC	CN801	30	YTU94126A-30

Table 1-7-1

Note: *Since the label of the test point on the board does not correspond to that of the jig connector (CN105), refer to the following table when using the jig connector practically.*

Besides the patch cord No. ②, prepare existing patch cords depending on the situation.

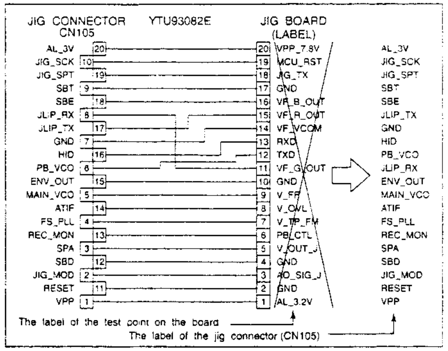

JIG CONNECTOR
CN105
YTU93082E
JIG BOARD
(LABEL)
AL_3V 20
JIG_SCK 10
JIG_SPT 19
SBT 9
SBE 18
JLIP_RX 8
JLIP_TX 17
GND 7
HID 16
PB_VCO 6
ENV_OUT 15
MAIN_VCO 5
ATIF 14
FS_PLL 4
REC_MON 13
SPA 3
SBD 12
JIG_MOD 2
RESET 11
VPP 1
20 VPP_7.8V
19 MCU_RST
18 JIG_TX
17 GND
16 VF_B_OUT
15 VF_R_OUT
14 VF_VCOM
13 RXD
12 TXD
11 VF_G_OUT
10 GND
9 V_FF
8 V_OWL
7 V_TP_FM
6 PB_CTL
5 V_OUT_J
4 GND
3 AO_SIG_J
2 GND
1 AL_3.2V
AL_3V
JIG_SCK
JIG_SPT
SBT
SBE
JLIP_TX
GND
HID
PB_VCO
JLIP_RX
ENV_OUT
MAIN_VCO
ATIF
FS_PLL
REC_MON
SPA
SBD
JIG_MOD
RESET
VPP
The label of the test point on the board
The label of the jig connector (CN105)

Table 1-7-2

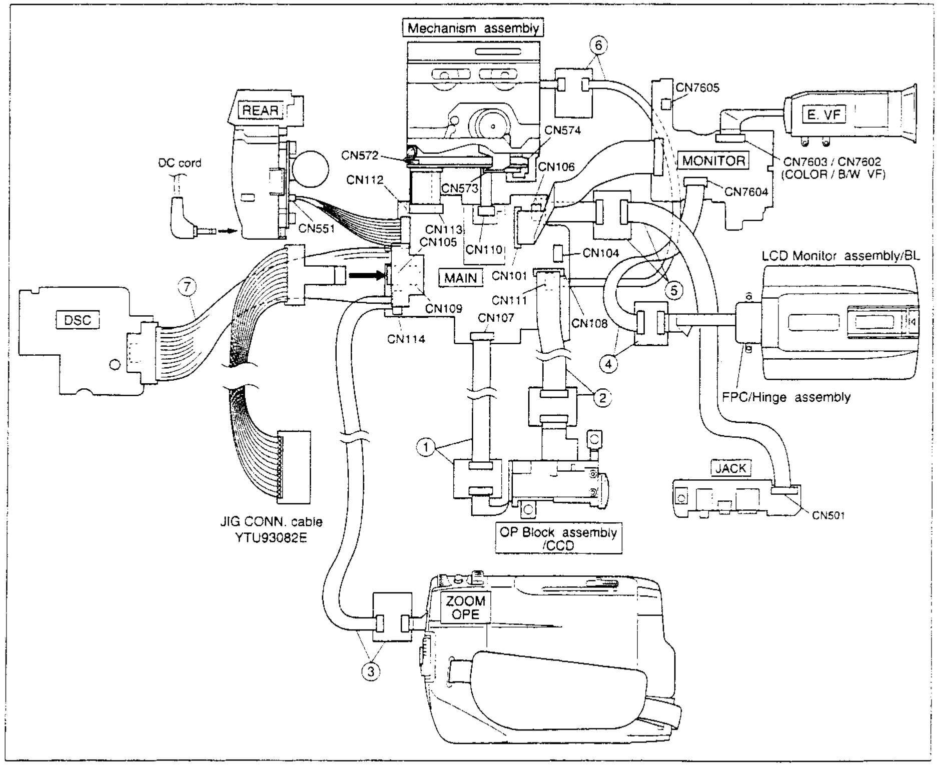

Mechanism assembly
⑥
CN7605
REAR
CN574
E. VF
DC cord
CN572
CN112
CN573
CN106
MONITOR
CN7603 / CN7602
(COLOR / B/W VF)
CN7604
CN551
CN113
CN105
CN110
CN104
LCD Monitor assembly/BL
⑦
MAIN
CN101
⑤
DSC
CN109
CN111
CN107
CN108
CN114
④
FPC/Hinge assembly
②
①
JACK
CN501
JIG CONN. cable
YTU93082E
OP Block assembly
/CCD
ZOOM
OPE
③

Fig. 1-7-1

Symbol No. →	①			②				③(⑧/⑨)							④			⑤		⑥			
Removing order of screw →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Place to stick screw →								*															
Reference drawing →	Fig.1-3-2																						
Screw tightening torque →	I																						

Symbol No. →	⑧		⑨			⑩			
Removing order of screw →	1	2	3	4	5	6	7	8	9
Place to stick screw →	*	*	*					*	*
Reference drawing →	Fig.1-3-3								
Screw tightening torque →	II		III						

	⑪		⑫		⑬		⑭			⑮	
Removing order of screw →	1	2	3	4	5	6	7	8	9	10	11
Place to stick screw →											
Reference drawing →	Fig.1-3-4										
Screw tightening torque →	I										

	MONITOR ASSY						
Removing order of screw →	1	2	3	4	5	6	7
Place to stick screw →							
Reference drawing →	Fig.1-4-1						
Screw tightening torque →	III				IV		

	B/W VF ASSY						
Removing order of screw →	1	2	3	4	5	6	7
Place to stick screw →							
Reference drawing →	Fig.1-5-1						
Screw tightening torque →	V				IV		

	COLOR VF ASSY					
Removing order of screw →	1	2	3	4	5	6
Place to stick screw →						
Reference drawing →	Fig.1-5-2					
Screw tightening torque →	V				IV	

	OP BLOCK ASSY								
Removing order of screw →	1	2	3	4	5	6	7	8	9
Place to stick screw →									
Reference drawing →	Fig.1-6-1								
Screw tightening torque →	V								

<NOTE>

1) * : *Don't reuse the screw, because screw lock bond was applied to them.*
2) *Pay careful attention to tightening torque for each screw.*

I : 0.078N·m(0.8kgf·cm)
II : 0.147N·m(1.5kgf·cm)
III : 0.098N·m(1.0kgf·cm)
IV : 0.069N·m(0.7kgf·cm)
V : 0.118N·m(1.2kgf·cm)

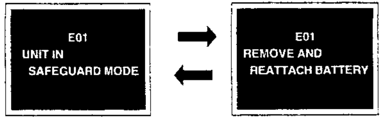
Table 1-8-1

1.9 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder).
In every error status, such the message as shown below alternately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



LCD display	Emergency mode	Details	Possible cause
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift. 3. No power is supplied to the loading MDA.
E02	UNLOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	1. The mechanism is locked during mode shift. 2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.
E03	TU & SUP REEL FG	In the case no REEL FG is produced for 4 seconds or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLOW/STILL mode.	1. The idler gear does not engage with the reel disk well. 2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism. 3. No FG pulse is output from the reel sensor. 4. No power is supplied to the reel sensor. 5. Tape transport operation takes place with a cassette having no tape inside. 6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	1. The drum cannot be started or drum rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. 2) The tape is damaged or soiled with grease, etc. 2. The DRUM FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the DRUM FG pulse generator (hall element). 3. No drum control voltage is supplied to the MDA. 4. No power is supplied to the DRUM MDA.
E05	-	-	-
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	1. The CAPSTAN FG signal is not received by the syscon CPU. 1) Disconnection in the middle of the signal line. 2) Failure of the CAPSTAN FG pulse generator (MR element). 2. No capstan control voltage is supplied to the MDA. 3. No power is supplied to the CAPSTAN MDA. 4. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. 1) Tape tension is extremely high. (Mechanical locking) 2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)

(DVC_03)

Table 1-9-1

SECTION 2
MECHANISM ADJUSTMENT

2.1 PRELIMINARY REMARKS ON ADJUSTMENT AND REPAIR

2.1.1 Precautions

1. When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.039 N·m (0.4 kgf·cm).
2. Be sure to disconnect the set from the power supply before fastening and soldering parts.
3. When disconnecting/connecting wires, be careful not to get them and their connectors damaged. (Refer to the Section 1.)
4. When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

2.1.2 Necessary jigs

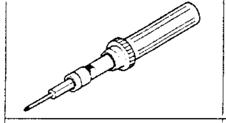
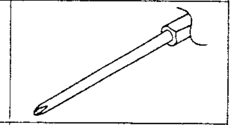
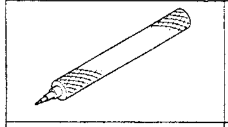
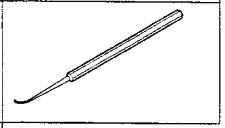
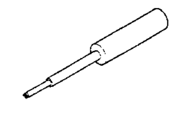
1	Torque driver YTU94088	2	Bit YTU94088-003
			
3	Slit washer fitting jig YTU94121A	4	Chip IC replacement jig PTS40844-2
			
5	Guide driver YTU94148A		
			

Fig. 2-1-1

2.1.3 Notes on procedure for disassemby/assembly

The disassembling procedure table (Table 2-2-2 on page 2-5, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts. Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

(1) Circled numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.

(2) This column shows part names corresponding to circled numbers in the left column.

(3) The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.
T = the upper side, B = the lower side

(4) Symbols appearing in this column indicate drawing numbers.

(5) This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.
P = Spring
W = Washer
S = Screw
* = Lock (L), soldering (SD), shield, connector (CN), etc.

Example
- Remove (W1) = Washer W1.
- * Remove the solder at (SD1) = Point SD1.
- * Disconnect Ⓐ = Connector Ⓐ.

(6) Numbers in this column represent the numbers of notes in the text. For example, "1" means "Note 1".
(For parts that need phase adjustment after reassembling, refer to "2.2.7 Check and adjustment of mechanism phase".)

(7) This column indicates required after-disassembling/-reassembling work such as phase adjustment or mechanism adjustment.

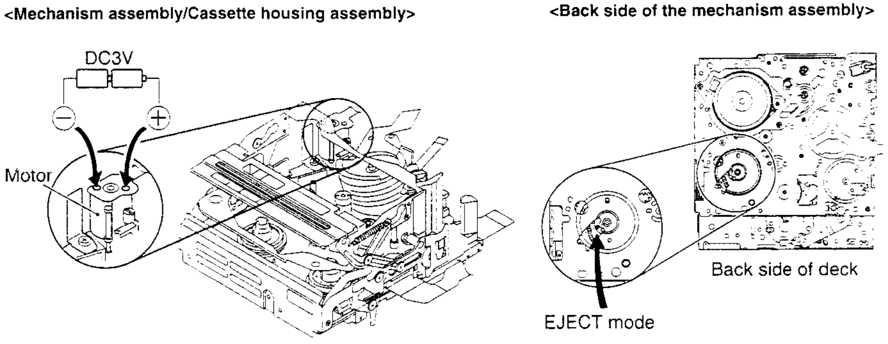
Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ	Cassette housing assembly	T	Fig. 2-2-12	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	Fig. 2-2-13	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	Fig. 2-2-14	(W3a)	3b	

(1) (2) (3) (4) (5) (6) (7)

2.2 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.2.1 General statement

The mechanism should generally be disassembled/assembled in the EJECT mode (ASSEMBLY mode). (Refer to Fig. 2-2-1.)
However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, it is required to shift the mechanism mode from the STOP mode to the EJECT mode after the mechanism is removed from the main body. In such the case, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the EJECT mode.


<Mechanism assembly/Cassette housing assembly>

<Back side of the mechanism assembly>

Fig. 2-2-1

2.2.2 Explanation of mechanism mode

The mechanism mode of this model is classified into six modes as shown in Table 2-2-1. Each mechanism mode can be distinguished from others by the relative position of "●" mark on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-2-2 to 2-2-7 below.
The EJECT mode, C IN mode and SHORT FF mode should be recognized by the relative position of the "●" mark to the inner protrusion, while the STOP mode, REV mode and PLAY mode should be recognized by that to the outer protrusion.

<EJECT mode>

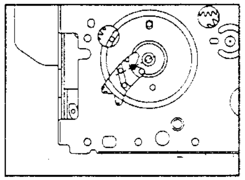


Fig. 2-2-2

<C IN mode>

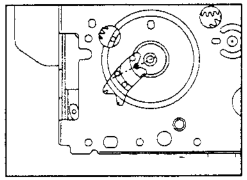


Fig. 2-2-3

<SHORT FF mode>

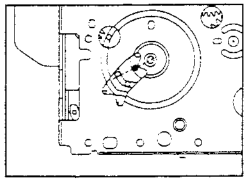


Fig. 2-2-4

<STOP mode>

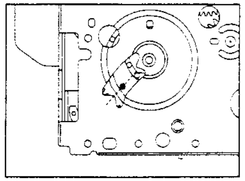


Fig. 2-2-5

<REV mode>

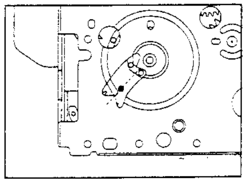


Fig. 2-2-6

<PLAY mode>

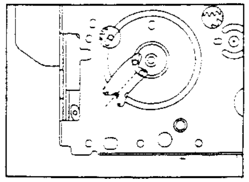


Fig. 2-2-7

2.2.3 Mechanism timing chart

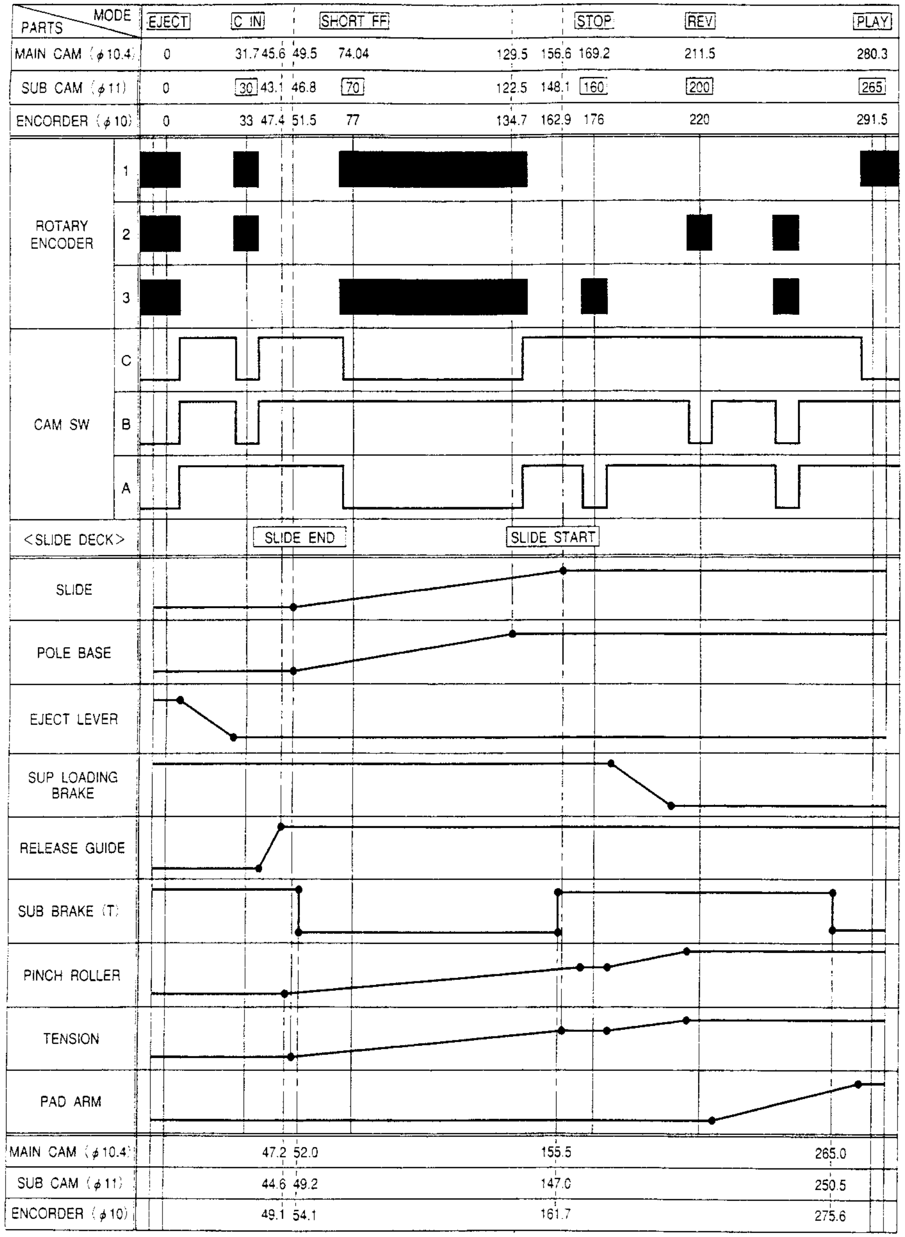


Table 2-2-1

2.2.4 Disassembly/assembly of mechanism assembly

1. Configuration

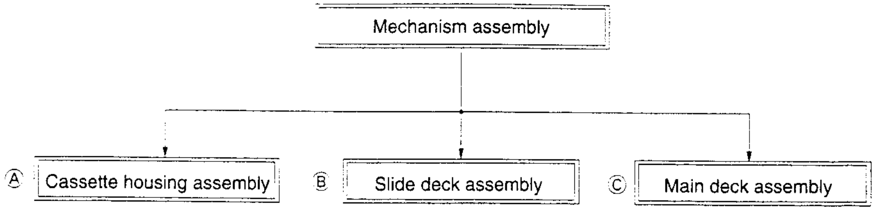

Mechanism assembly
Ⓐ Cassette housing assembly
Ⓑ Slide deck assembly
Ⓒ Main deck assembly

Fig. 2-2-8

2. Procedures for disassembly

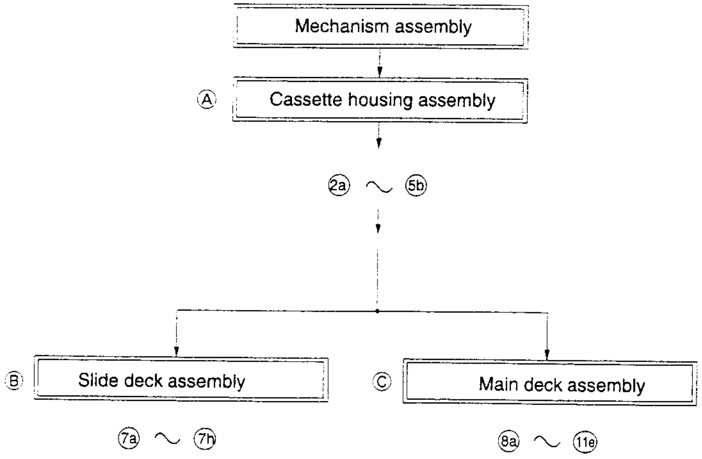

Mechanism assembly
Ⓐ Cassette housing assembly
2a ～ 5b
Ⓑ Slide deck assembly
Ⓒ Main deck assembly
7a ～ 7h
8a ～ 11e

Fig. 2-2-9

3. Disassembling procedure table

Step	Part Name		Fig.	Point	Note	Remarks
Ⓐ	Cassette housing assembly	T	Fig. 2-2-12	3(S1),(L1a)-(L1d)	1a, 1b, 1c, 1d	Adjustment
(2a)	Reel disk (SUP) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2b)	Reel disk (TU) assembly	T	Fig. 2-2-13	(W2)	2a, 2b	
(2c)	Reel cover assembly	T	Fig. 2-2-13	(S2b),2(S2a),(W2)	2d	
(3a)	Tension arm assembly	T	Fig. 2-2-14	(W3a)	3b	
(3b)	Release guide assembly	T	Fig. 2-2-14	-	3a	
(3c)	Idler arm assembly	T	Fig. 2-2-14	(W3b)	-	
(3d)	Guide arm assembly	T	Fig. 2-2-14	-	3a	
(3e)	Pinch roller arm assembly	T	Fig. 2-2-14	(W3a)	-	
(4a)	Cleaner arm assembly	T	Fig. 2-2-15	(L4a)	4a	
(4b)	Slant pole arm assembly	T	Fig. 2-2-15	(W4),(L4b),(P4a),(P4b)	4c	
(4c)	Drum assembly	T	Fig. 2-2-15	3(S4)	4b	
(5a)	Guide roller (S) assembly	T	Fig. 2-2-16	(P5)	5a, 5b	
(5b)	Rail assembly	T	Fig. 2-2-16	3(W5)	5c, 5d	
Ⓑ	Slide deck assembly / Ⓒ Main deck assembly	T	Fig. 2-2-17	(W6),(L6a)-(L6d)	6a, 6b	(Adjustment)
Ⓑ	Slide deck assembly					
(7a)	Loading brake assembly	T	Fig. 2-2-18	(W7),(L7a),(P7a)	7e	Adjustment
(7b)	Guide pin (SUPPLY)	T	Fig. 2-2-18	(S7a)	-	
(7c)	Pad arm assembly	T	Fig. 2-2-18	(W7),(L7b),(P7b)	7d	
(7d)	Slide guide plate assembly	T	Fig. 2-2-18	(S7b)	7c	Adjustment
(7e)	Collar	T	Fig. 2-2-18	-	7a	
(7f)	Collar	T	Fig. 2-2-18	-	7a	
(7g)	Sub brake assembly	T	Fig. 2-2-18	(W7),(L7c),(P7c)	7b	
(7h)	Control plate assembly	T	Fig. 2-2-18	2(W7),(L7d),(P7d)	7b	
Ⓒ	Main deck assembly					
(8a)	Tension lever assembly	T	Fig. 2-2-19	-	8c	
(8b)	Slide lever assembly	T	Fig. 2-2-19	-	8b	
(8c)	Brake control lever assembly	T	Fig. 2-2-19	-	8a	
(9a)	Loading guide	T	Fig. 2-2-20	(S9)	-	
(9b)	Timing belt	T	Fig. 2-2-20	-	9b	
(9c)	Center gear assembly	T	Fig. 2-2-20	-	-	
(9d)	Motor bracket assembly	T	Fig. 2-2-20	2(S9)	9a	
(9e)	Worm wheel	T	Fig. 2-2-20	(W9)	-	(Phase adjustment)
(9f)	Gear holder	T	Fig. 2-2-20	(S9)	-	
(10a)	Main cam gear	T	Fig. 2-2-21	(S10)	10b	Phase adjustment
(10b)	Brake control plate	T	Fig. 2-2-21	(L10)	10b	Phase adjustment
(10c)	Rotary encoder	T	Fig. 2-2-21	(S10),(W10a)	10a	Phase adjustment
(10d)	Connect gear	T	Fig. 2-2-21	(W10a)	-	(Phase adjustment)
(10e)	Reel drive pulley assembly	T	Fig. 2-2-21	(W10b)	-	
(11a)	Catcher (T) assembly	T	Fig. 2-2-22	2(S11)	-	
(11b)	Capstan motor	T	Fig. 2-2-22	2(S11)	-	
(11c)	Charge arm assembly	T	Fig. 2-2-22	(W11)	11	
(11d)	Sub cam gear	T	Fig. 2-2-22	(S11)	-	Phase adjustment
(11e)	PWB holder	B	Fig. 2-2-22	2(S11)	-	

Table 2-2-2

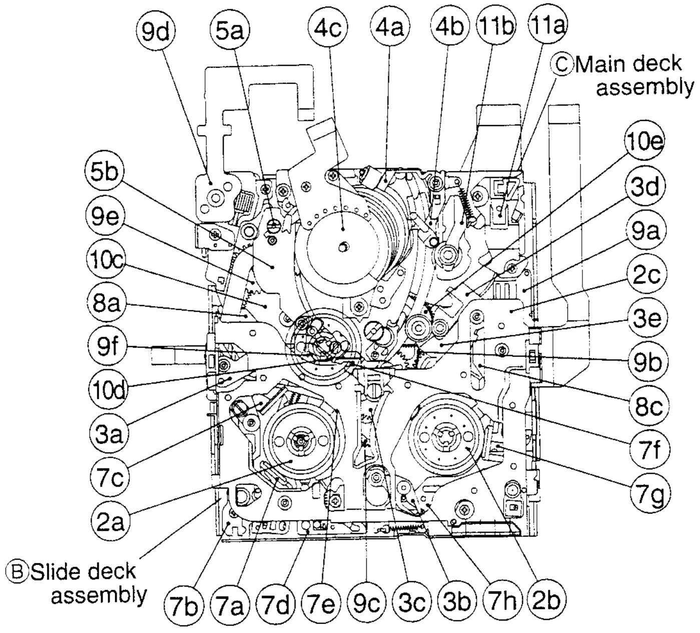


Fig. 2-2-10 Top view

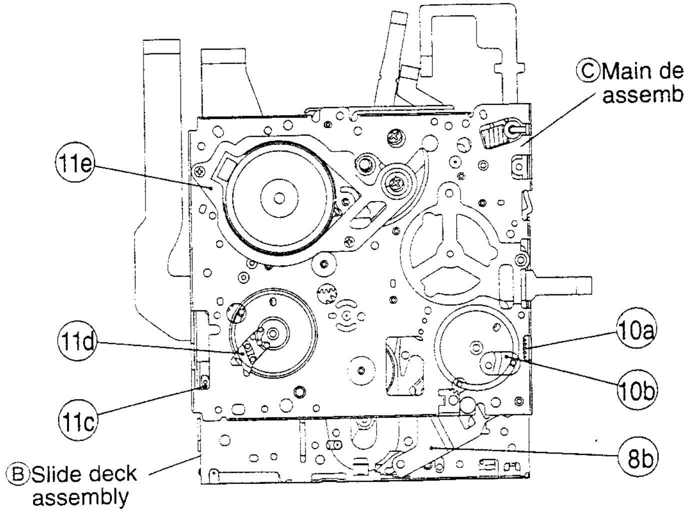


Fig. 2-2-11 Bottom view

2.2.5 Disassembly/assembly

1. Ⓐ Cassette housing assembly

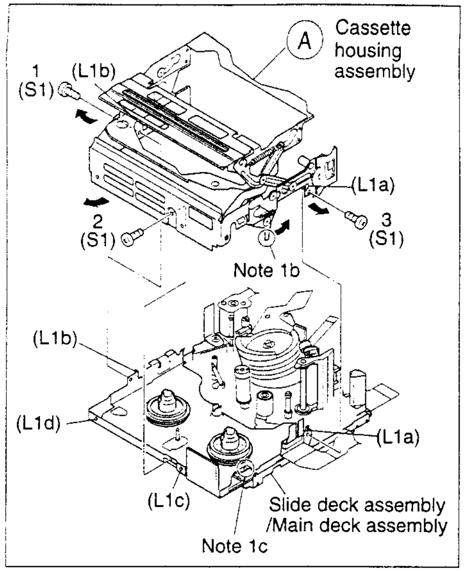
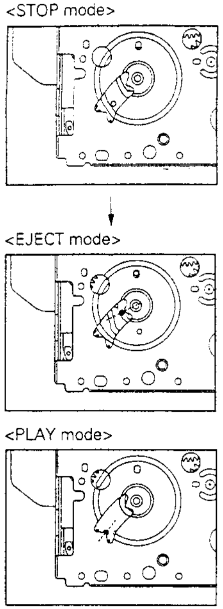

Ⓐ Cassette housing assembly
1 (S1)
(L1b)
(L1a)
2 (S1)
3 (S1)
Note 1b
(L1b)
(L1d)
(L1a)
(L1c)
Slide deck assembly /Main deck assembly
Note 1c

Fig. 2-2-12



Note 1a:
Shift the mechanism mode from the STOP mode to the EJECT mode.

Note 1b:
Reassemble the cassette housing assembly to the mechanism as the cancel lever is moved in the direction of the arrow.

Note 1c:
When reassembling the cassette housing to the mechanism, make sure that there is no deformation in the frame or no damage to the switches, etc.

Note 1d:
After reassembling the component parts, check the mechanism operation in the PLAY mode.
For details of checking method, refer to "2.2.8 assembling slide deck assembly and main deck assembly".

2. (2a) Reel disk (SUP) assembly
(2b) Reel disk (TU) assembly
(2c) Reel cover assembly

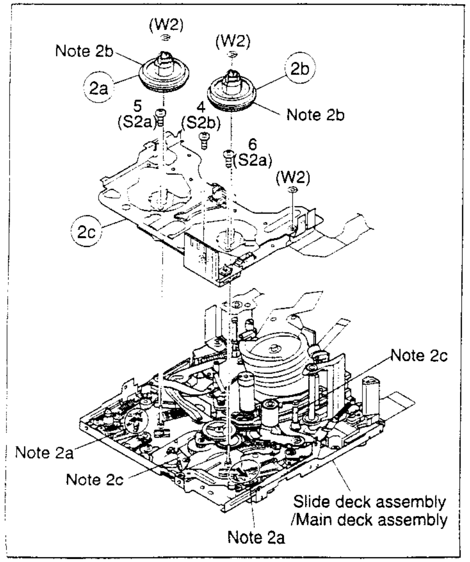
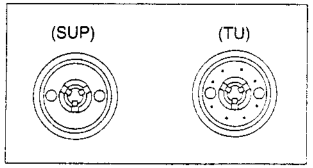

(W2)
(W2)
Note 2b
(2a)
(2b)
5 (S2a)
4 (S2b)
Note 2b
6 (S2a)
(W2)
(2c)
Note 2c
Note 2a
Note 2c
Slide deck assembly /Main deck assembly
Note 2a

Fig. 2-2-13

Note 2a:
When removing the reel disk assembly, be careful not to break the brake pad which applies lateral pressure to the reel disk.
Note 2b:
Be careful not to make a mistake in installing the reel disk. The SUP reel disk and TU reel disk can be distinguished from each other by the appearance as shown below.



Note 2c:
When removing the reel cover assembly, pay heed to the guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 2d:
When fitting the reel cover assembly to the set, carefully tighten the screw with the specified tightening torque of 0.068N·m (0.7kgf·cm).

3. (3a) Tension arm assembly/(3b) Release guide assembly
(3c) Idler arm assembly/(3d) Guide arm assembly
(3e) Pinch roller arm assembly

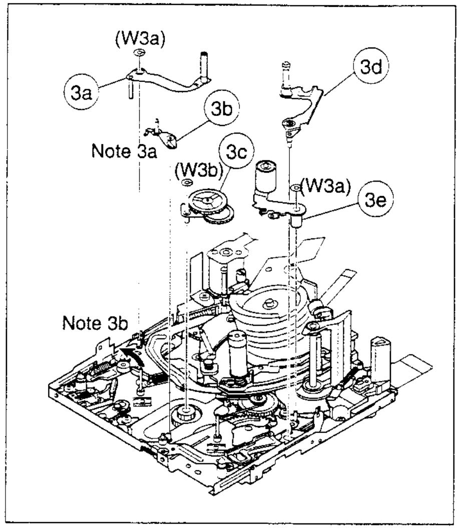
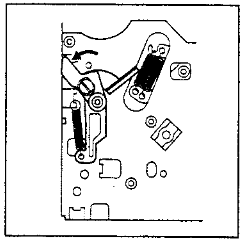

(W3a)
(3a)
(3b)
(3d)
Note 3a
(3c)
(W3b)
(W3a)
(3e)
Note 3b

Fig. 2-2-14

Note 3a:
When removing the reel cover assembly, pay heed to release guide assembly and guide arm assembly. For, the guide arm assembly is just inserted into the slide deck assembly from the upside and it is apt to come off after the reel cover assembly is removed.

Note 3b:
Reassemble the tension arm assembly to the mechanism as the pad arm assembly is moved to the extent in the direction of the arrow.



4. (4a) Cleaner arm assembly/(4b) Slant pole arm assembly
(4c) Drum assembly

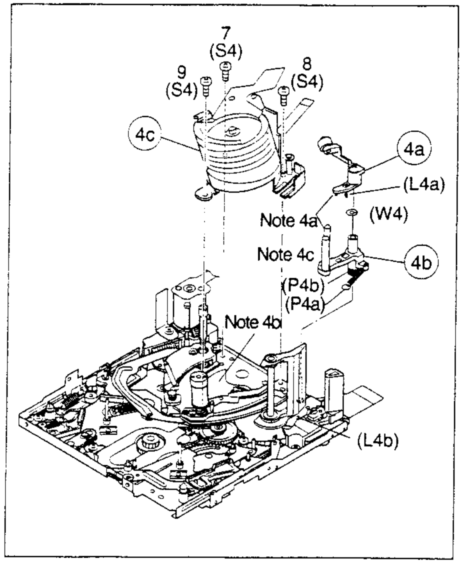
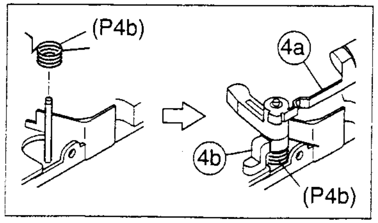

7 (S4)
9 (S4)
8 (S4)
(4c)
(4a)
(L4a)
Note 4a
(W4)
Note 4c
(4b)
(P4b)
(P4a)
Note 4b
(L4b)

Fig. 2-2-15

Note 4a:
When removing the cleaner arm assembly, it is recommended to remove the slant pole arm assembly together with it except the case of a single unit replacement, because the hook (L4a) is hard to disengage.

Note 4b:
When the shield is applied, carefully remove the drum final assembly because the drum is stuck to the shield.

Note 4c:
How to set the coil spring (P4b).


(P4b)
(4a)
(4b)
(P4b)

5. (5a) Guide roller (SUPPLY) assembly/(5b) Rail assembly

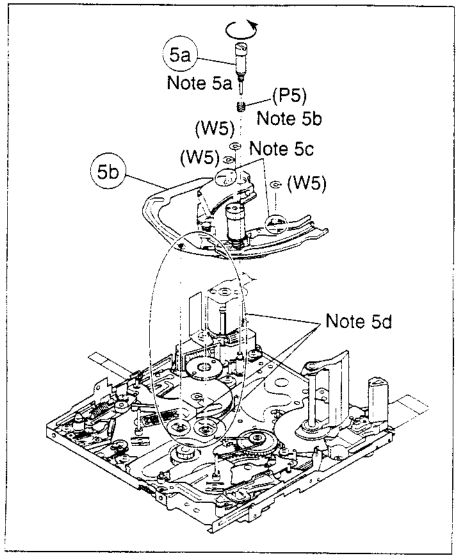


Fig. 2-2-16

Note 5a:
When removing the rail assembly, remove the guide roller (SUPPLY) assembly beforehand.

Note 5b:
Pay careful attention to the spring not to lose it.

Note 5c:
Pay careful attention to the engagement of the rail assembly's arm ends because they easily come off the engagement. Moreover, make sure that there is neither deformation nor damage observed in them.

Note 5d:
When removing the rail assembly, check to see if the collar is securely set in the arm groove.

6. Ⓑ Slide deck assembly/ Ⓒ Main deck assembly

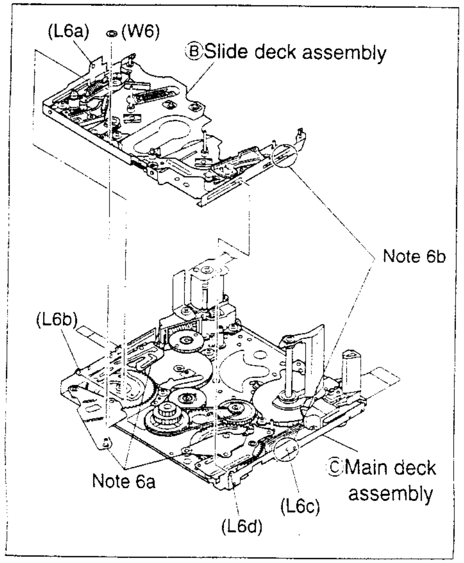
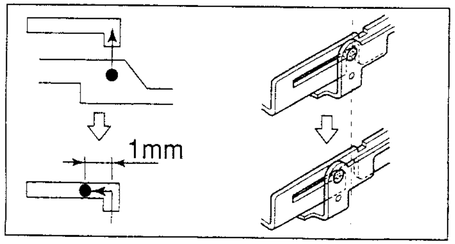


Fig. 2-2-17

Note 6a:
When removing the slide deck assembly, pay heed to the three components of the following because they are apt to come off after the slide deck assembly is removed.

(8a) Tension lever assembly/(8b) Slide lever assembly
(8c) Brake control lever assembly
For reassembling those components, refer to Fig. 2-2-19 on page 2-10.

Note 6b:
When reassembling the slide deck assembly to the main deck assembly, combine them with each other by the side grooves and then slide the slide deck assembly by 1 mm or so.



7. (7a) Loading brake assembly/(7b) Guide pin (S) (7c) Pad arm assembly/(7d) Slide guide plate assembly (7e) Collar/(7f) Collar/(7g) Sub brake assembly (7h) Control plate assembly

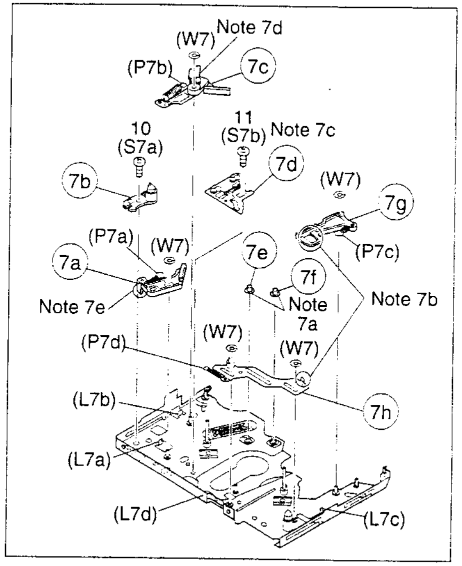
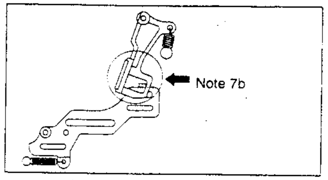


Fig. 2-2-18

Note 7a:
Don't remove these parts unreasonably. If they are removed for some reason, be very careful not to lose them.

Note 7b:
When reinstalling the sub brake assembly, set the control plate assembly so that its hook is set in the ⊑ part of the sub brake assembly.



Note 7c:
Since the slide guide plate assembly controls the slide deck assembly so that it exactly slides the main deck assembly, it must exactly be assembled in the PLAY mode. Therefore, temporarily fix the slide guide plate assembly in this stage. For details of reassembling procedure, refer to "2.2.8 Assembling slide deck assembly and main deck assembly" on page 2-15.

Note 7d:
The pad arm assembly controls the tension level of the tension arm assembly. For adjustment of the tension arm assembly, refer to page 2-8.

Note 7e:
When reinstalling the load brake assembly, slightly lift the slide deck assembly upwards because the lower part of the load brake assembly sticks out of the slide deck assembly.

8. (8a) Tension lever assembly/(8b) Slide lever assembly (8c) Brake control lever assembly

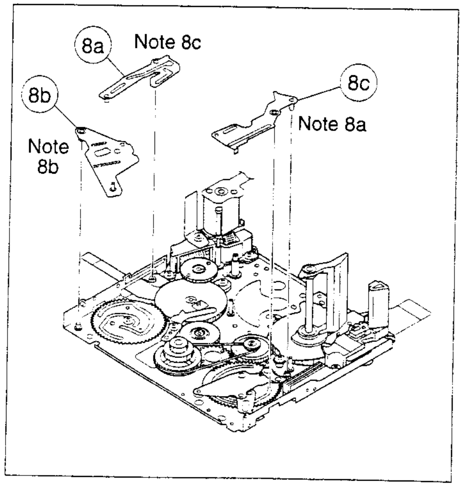
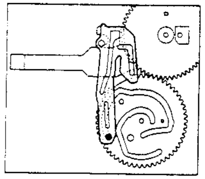


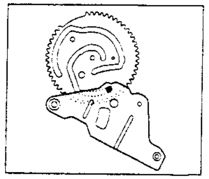
Fig. 2-2-19

Note 8a, 8b, 8c:
For refitting the respective parts, refer to the following figures

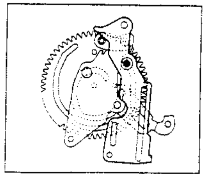
(8a) Tension lever assembly



(8b) Slide lever assembly



(8c) Brake control lever assembly



9. (9a) Loading guide/(9b) Timing belt
(9c) Center gear assembly/(9d) Motor bracket assembly
(9e) Worm wheel/(9f) Gear holder

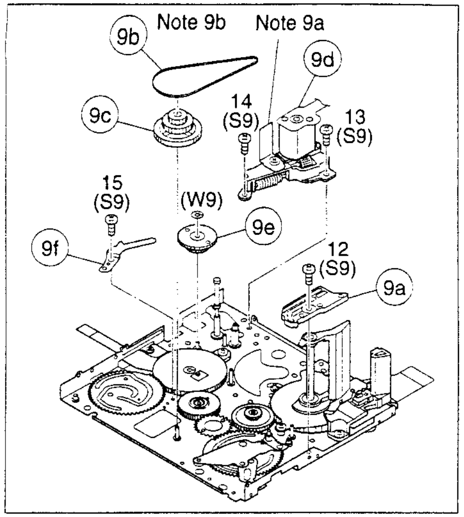

9b
Note 9b
Note 9a
9d
9c
14
(S9)
13
(S9)
15
(S9)
(W9)
9e
9f
12
(S9)
9a

Fig. 2-2-20

Note 9a:
Carefully handle the DEW sensor. (Don't touch the sensor surface in particular.)

Note 9b:
When engaging the timing belt, make sure that it securely engages with the gears of both the center gear assembly and reel drive pulley assembly.

10. (10a) Main cam gear/(10b) Brake control plate
(10c) Rotary encoder/(10d) Connect gear
(10e) Reel drive pulley assembly

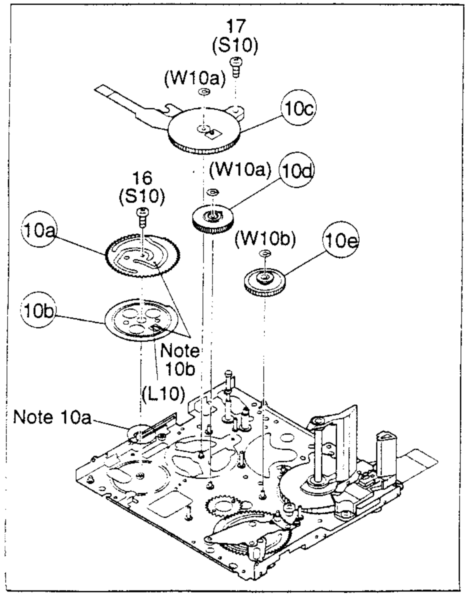
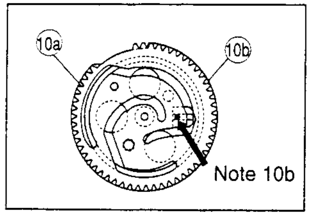

17
(S10)
(W10a)
10c
16
(S10)
(W10a)
10d
10a
(W10b)
10e
10b
Note
10b
(L10)
Note 10a

Fig. 2-2-21

Note 10a:
When removing/refitting parts, pay careful attention to the flexible board and so on not to damage them.

Note 10b:
When reinstalling the main cam gear and the brake control plate, first fit them together so that the protrusion on the brake control plate is set in the slot on the main cam gear as shown below, next install the two together to the main deck assembly.


10a
10b
Note 10b

11. (11a) Catcher (T) assembly/(11b) Capstan motor
(11c) Charge arm assembly/(11d) Sub cam gear
(11e) PWB holder

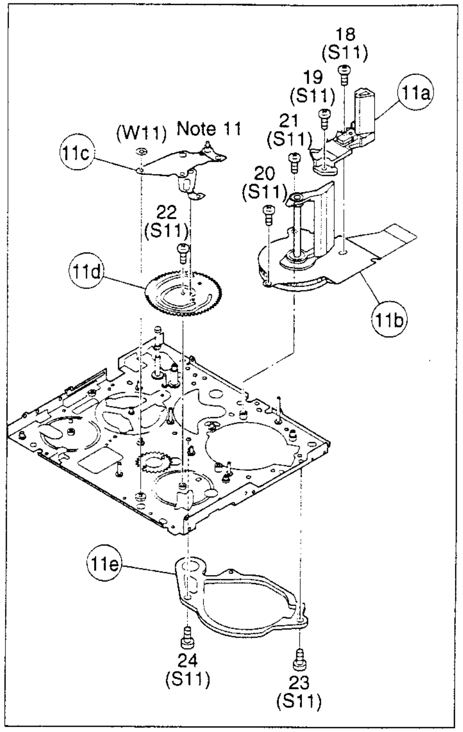
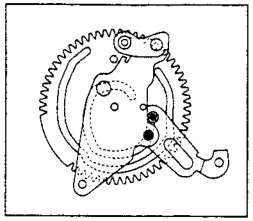
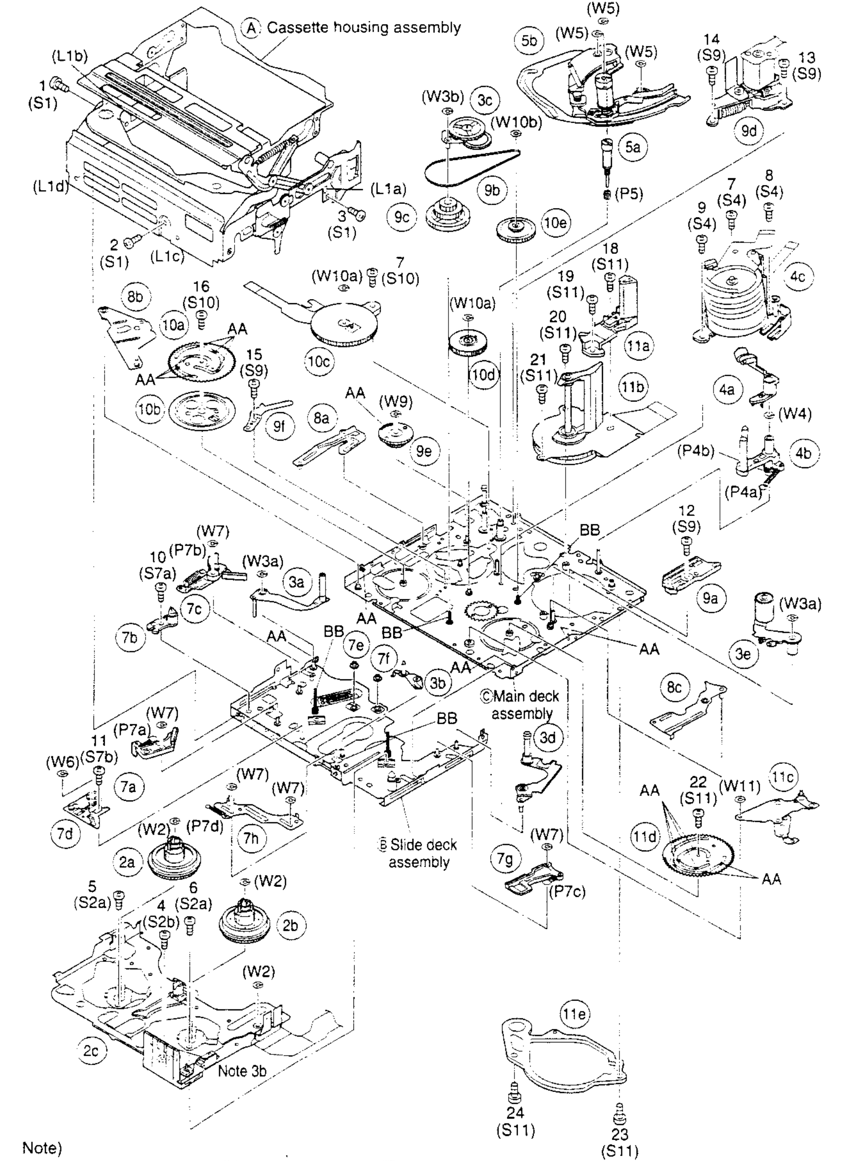

18
(S11)
19
(S11)
11a
(W11)
Note 11
21
(S11)
11c
20
(S11)
22
(S11)
11d
11b
11e
24
(S11)
23
(S11)

Fig. 2-2-22

Note 11:
The following figure shows how to put the charge arm assembly and sub cam gear assembly together.



2.2.6 List of procedures for disassembly

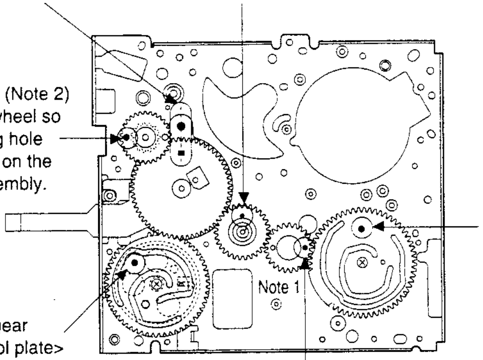

Ⓐ Cassette housing assembly
(L1b)
1
(S1)
(L1d)
(L1a)
3
(S1)
2
(S1)
(L1c)
(W5)
5b
(W5)
(W5)
(W3b)
3c
(W10b)
5a
9b
9c
(P5)
10e
14
(S9)
13
(S9)
9d
7
(S4)
8
(S4)
9
(S4)
4c
7
(W10a)
(S10)
18
(S11)
19
(S11)
20
(S11)
21
(S11)
11a
11b
(W10a)
10d
10c
8b
16
(S10)
10a
AA
15
(S9)
10b
9f
8a
(W9)
9e
4a
(W4)
(P4b)
4b
(P4a)
12
(S9)
BB
9a
(W3a)
3e
(W7)
10
(P7b)
(S7a)
(W3a)
3a
7c
7b
AA
BB
7e
7f
3b
ⓒMain deck assembly
BB
3d
8c
(W7)
11
(P7a)
(W6)
(S7b)
7a
7d
(W7)
(W7)
(W2)
(P7d)
7h
2a
5
(S2a)
6
4 (S2a)
(S2b)
(W2)
2b
(W2)
2c
Note 3b
Ⓑ Slide deck assembly
7g
(W7)
(P7c)
AA
22
(S11)
(W11)
11c
11d
AA
11e
24
(S11)
23
(S11)

Note)

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

Fig. 2-2-23

2.2.7 Checkup and adjustment of mechanism phase



<Rotary encoder>
Set the "■" of the rotary part at the tapped hole as shown in the figure.

<Connect gear> (Note 2)
Set the connect gear so that its locating hole meets the hole on the main deck assembly.

<Worm wheel> (Note 2)
Set the worm wheel so that its locating hole meets the hole on the main deck assembly.

<Sub cam gear>
Set the sub cam gear so that its locating hole meets the hole on the main deck assembly. This state represents that the mechanism is in the EJECT mode, which is the "mechanism assembly mode".

<Main cam gear /Brake control plate>
After fitting the main cam\ gear and brake control plat together,set them together so that their locating holes meet the hole on the main \ deck assembly.

<Connect gear 2> (Note 2)
Set the connect gear 2 so that its locating hole meets the hole on the main deck assembly.

Note 1:
Since the connect gear 2 is tightly fixed to the main deck by caulking, adjust its phase with the connect gear and sub cam gear.

Note 2:
The part that needs phase adjustment by the hole on the main deck assembly must exactly be set as the specified phase. There is a fear that some part is installed in a wrong phase because assembling of the mechanism is automated. If so, set every part in the correct phase whenever the mechanism is reassembled.

Fig. 2-2-24

2.2.8 Assembling slide deck assembly and main deck assembly

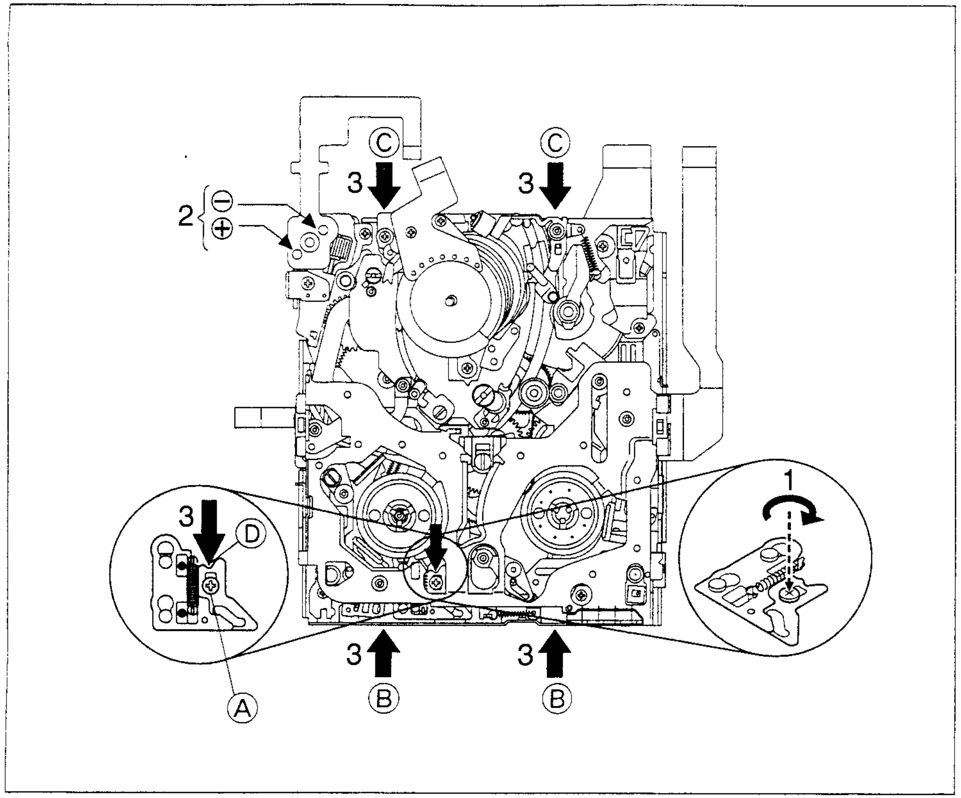


Fig. 2-2-25

Assembling procedure

1. Loosen the screw Ⓐ.
2. Set the mechanism in the PLAY mode. (Refer to page 2-2.)
3. Press the end face B of the slide deck assembly (reel disk side) and the end face Ⓒ of the main deck assembly (drum assembly side) with uniform force so that the two assemblies are tightly pressed to each other. Furthermore, press the part Ⓓ and tighten the screw Ⓐ.

Note : *Tightening torque for screw Ⓐ: 0.029 N·m (0.3 kgf·cm)*

2.2.9 Locating tension pole

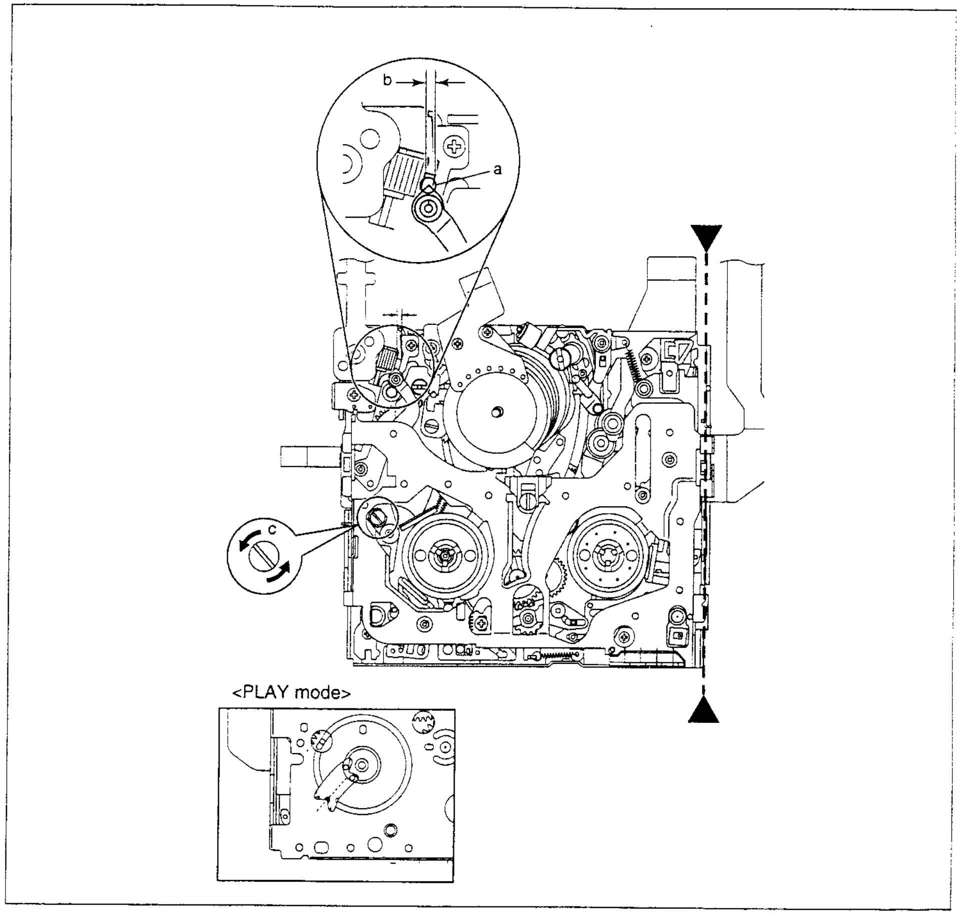


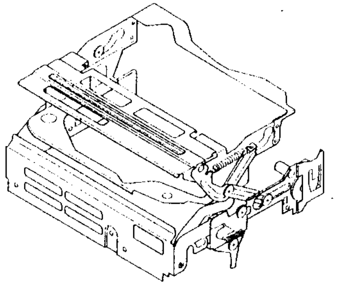
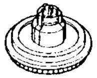
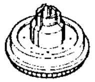
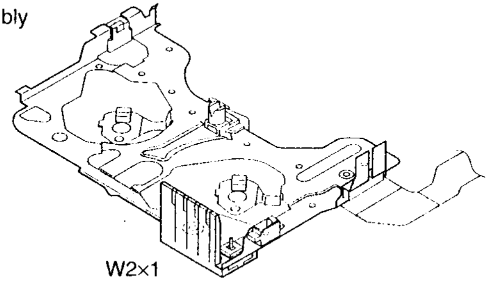
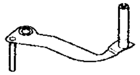
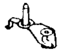
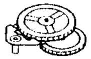
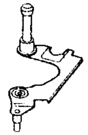
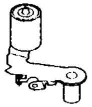
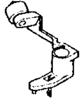
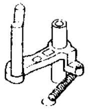
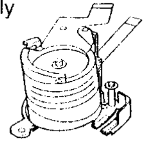
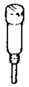
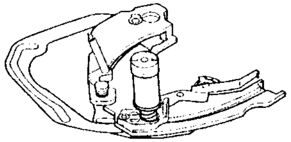
Fig. 2-2-26

Locating procedure

1. Enter the mechanism assembly into the PLAY mode. (Refer to page 2-2.)
2. When the " ▶-----◀ " part is positioned down, make sure that the part "a" of the tension arm assembly is located within the range of "b".
3. If the part "a" is out of the range, turn the pin "c" to adjust the position.

2.3 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

1	Ⓐ Cassette housing assembly		S1×3
2	(2a) Reel disk (SUP) assembly		W2×1
	(2b) Reel disk (TU) assembly		W2×1
	(2c) Reel cover assembly		S2a×2 S2b×1 W2×1
3	(3a) Tension arm assembly		W3a×1
	(3b) Release guide assembly		
	(3c) Idler arm assembly		W3b×1
	(3d) Guide arm assembly		
	(3e) Pinch roller arm assembly		W3a×1
4	(4a) Cleaner arm assembly		
	(4b) Slant pole arm assembly		W4×1 P4a×1 P4b×1
	(4c) Drum assembly		S4×3
5	(5a) Guide roller (S) assembly		P5×1
	(5b) Rail assembly		W5×3

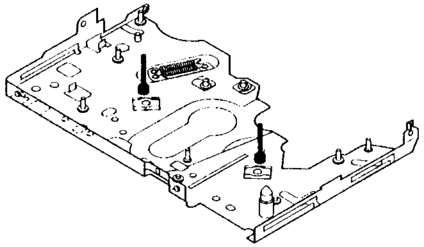
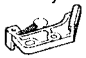
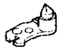
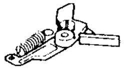
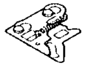
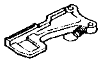
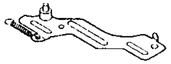
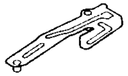
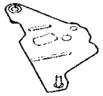
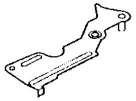
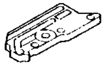
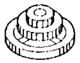
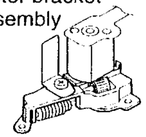
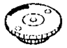
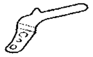
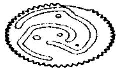
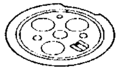
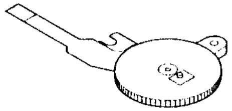
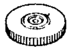
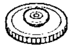
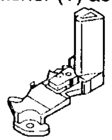
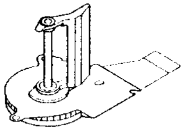
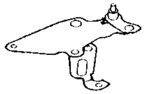
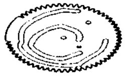
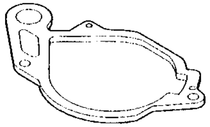
6	Ⓑ Slide deck assembly  W6×1							
7	(7a) Loading brake assembly  W7×1 P7a×1	(7b) Guide pin (SUPPLY)  S7a×1	(7c) Pad arm assembly  W7×1 P7b×1	(7d) Slide guide plate assembly  S7b×1 W7×1	(7e) Collar	(7f) Collar	(7g) Sub brake assembly  W7×1 P7c×1	(7h) Control plate assembly  W7×2 P7d×1
8	(8a) Tension lever assembly 	(8b) Slide lever assembly 	(8c) Brake control lever assembly 					
9	(9a) Loading guide  S9×1	(9b) Timing belt	(9c) Center gear assembly 	(9d) Motor bracket assembly  S9×2	(9e) Worm wheel  W9×1	(9f) Gear holder  S9×1		
10	(10a) Main cam gear  S10×1	(10b) Brake control plate 	(10c) Rotary encoder  S10×1 W10a×1	(10d) Connect gear  W10a×1	(10e) Reel drive pulley assembly  W10b×1			
11	(11a) Catcher (T) assembly  S11×2	(11b) Capstan motor  S11×2	(11c) Charge arm assembly  W11×1	(11d) Sub cam gear  S11×1	(11e) PWB holder  S11×2			

Table 2-3-1

2.4 JIG CONNECTOR CABLE (YTU93082E) CONNECTOR

Remove one screw (1) first and the cover (JIG) next.

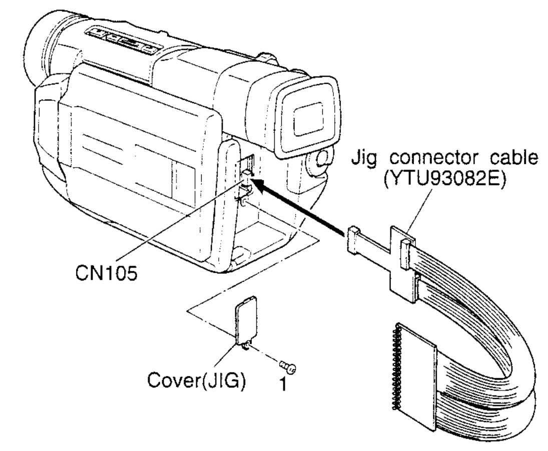

Jig connector cable
(YTU93082E)
CN105
Cover(JIG)
1

Fig. 2-4-1 Jig connector cable connection

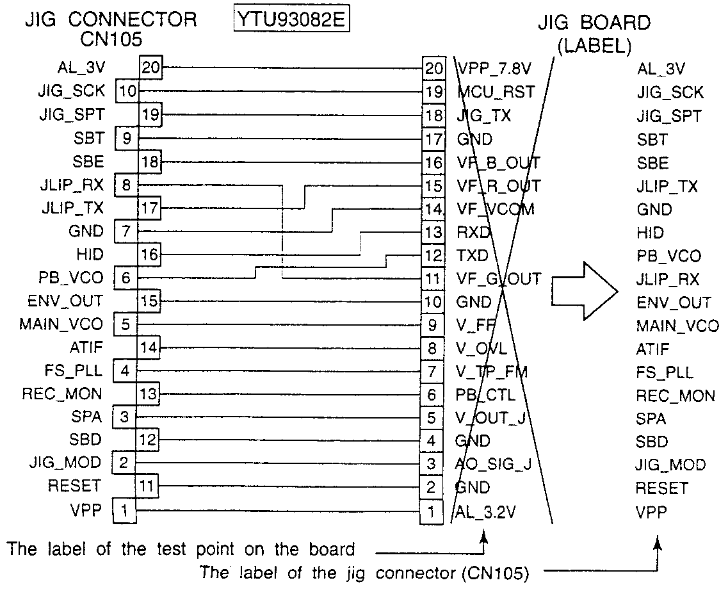

JIG CONNECTOR
CN105
YTU93082E
JIG BOARD
(LABEL)
AL_3V 20 20 VPP_7.8V AL_3V
JIG_SCK 10 19 MCU_RST JIG_SCK
JIG_SPT 19 18 JIG_TX JIG_SPT
SBT 9 17 GND SBT
SBE 18 16 VF_B_OUT SBE
JLIP_RX 8 15 VF_R_OUT JLIP_TX
JLIP_TX 17 14 VF_VCOM GND
GND 7 13 RXD HID
HID 16 12 TXD PB_VCO
PB_VCO 6 11 VF_G_OUT JLIP_RX
ENV_OUT 15 10 GND ENV_OUT
MAIN_VCO 5 9 V_FF MAIN_VCO
ATIF 14 8 V_OVL ATIF
FS_PLL 4 7 V_TP_FM FS_PLL
REC_MON 13 6 PB_CTL REC_MON
SPA 3 5 V_OUT_J SPA
SBD 12 4 GND SBD
JIG_MOD 2 3 AO_SIG_J JIG_MOD
RESET 11 2 GND RESET
VPP 1 1 AL_3.2V VPP
The label of the test point on the board
The label of the jig connector (CN105)

Fig. 2-4-2 Jig connector cable schematic diagram

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 PREPARATION

1. Precaution

Both the camera and deck sections of this model needs a personal computer for adjustment except simple adjustment with potentiometers. If some of the following parts is replaced for repair or other reason, the repaired set must be adjusted with a personal computer.

- OP block
- E²PROM (IC1003 of MAIN board)
- MONITOR
- E²P ROM (IC7603 of MONITOR board)

In the event of malfunction with electrical circuits, troubleshooting with the aid of proper test instruments most be done first, and then commence necessary repair, replacement and adjustment, etc.

1. In case of wiring to chip test points for measurement, use IC clips, etc. to avoid any stress.
2. Since connectors are fragile, carefully handle them in disconnecting and connecting.
3. Shortcircuit between operation un it and DECK chassis.

2. Required test equipment

1. Color TV monitor.
2. AC power adapter/charger
3. Oscilloscope (dual-trace type, observable 100 MHz or higher frequency)

Note: *It is recommended to use one observable 300 MHz or higher frequency.*

4. Digital voltmeter
5. Frequency counter (with threshold level adjuster)
6. Personal computer

3. Required adjustment tools

For detsails of special jigs necessary for adjustment, refer to page 1-2 and 1-3 of the Section 1.

3.2 E. VF SECTION ADJUSTMENT (B/W VF ONLY)

Referring to "SEC. 1 DISASSEMBLY" and connect the E.VF FPC to CN7602 of the MONITOR board.

3.3 SETUP

1. Setup for electrical adjustment with personal computer

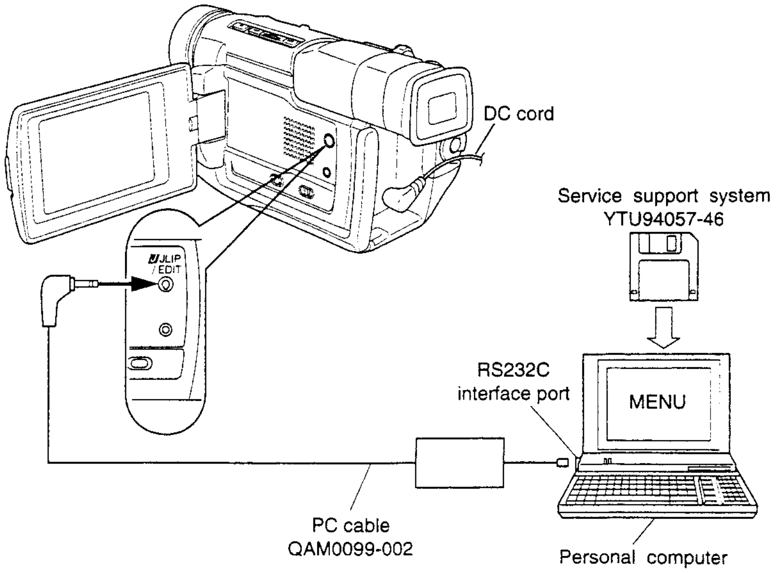

DC cord
JLIP / EDIT
Service support system
YTU94057-46
RS232C
interface port
MENU
PC cable
QAM0099-002
Personal computer

Fig. 3-3-1 Connection for Service support system (I)

2. Setup with patch cords and jig connector cables

NOTE:

Fig. 3-3-2 shows an example of expansion setup that facilitates inspection of major boards because main components are connected by means of patch cords and jig cables. For proceeding to electrical adjustment in such the setup, disassemble the set at a certain level required for the current adjustment objectives referring to the section 1 "DISASSEMBLY" and properly set up the expanded set and test instruments.

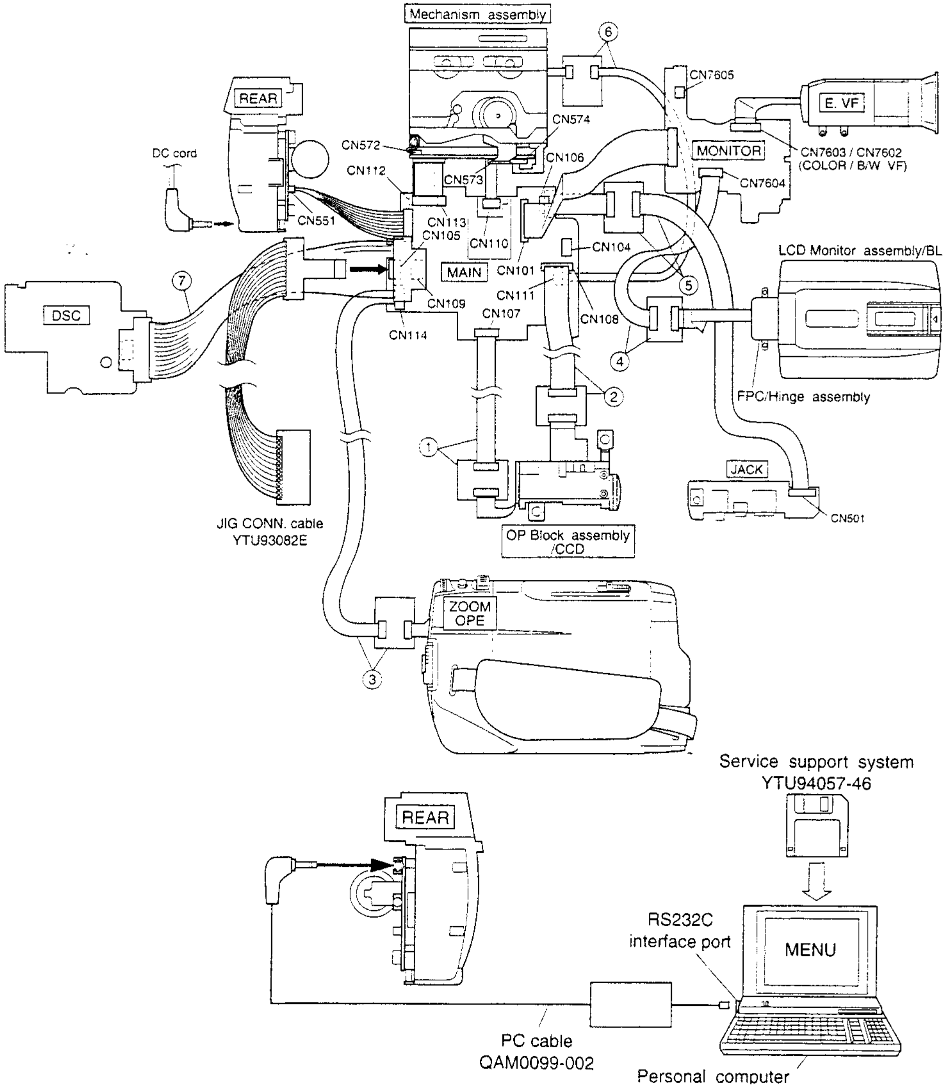

Mechanism assembly
⑥
CN7605
E. VF
REAR
DC cord
CN572
CN112
CN574
CN106
MONITOR
CN7603 / CN7602
(COLOR / B/W VF)
CN7604
CN573
CN551
CN113
CN105
CN110
CN104
LCD Monitor assembly/BL
MAIN
CN101
⑦
DSC
CN109
CN111
CN107
CN108
⑤
CN114
④
②
FPC/Hinge assembly
①
JACK
CN501
JIG CONN. cable
YTU93082E
OP Block assembly
/CCD
ZOOM
OPE
③
Service support system
YTU94057-46
REAR
RS232C
interface port
MENU
PC cable
QAM0099-002
Personal computer

Fig. 3-3-2 Setup for electrical adjustment with personal computer (II)

3.4 ELECTRONIC VIEWFINDER (B/W VF) ADJUSTMENT

Notes: *Unless otherwise specified, all measurement points and adjustment parts are located on MONITOR board.*

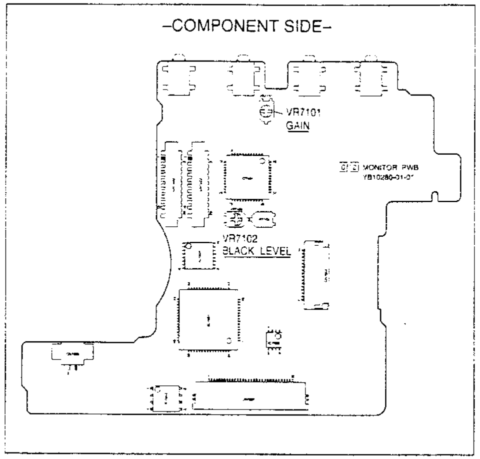

-COMPONENT SIDE-
VR7101
GAIN
MONITOR PWB
VR7102
BLACK LEVEL

Fig. 3-4-1 MONITOR board

3.4.1 Black level

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7101 pin 27 (VIDLO)
Adjustment part	• VR7102 (Black level)
Specification	• "A"=2.5 V ± 0.05 V

1) Observe waveform at pin 27 of the IC7101.
2) Adjust VR7102 so that DC level of "A" (between the pedestal level and GND, see Fig. 3-4-2) of a waveform becomes 2.5 V ± 0.05 V.

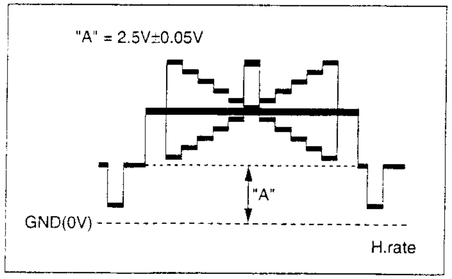


Fig. 3-4-2 Black level

3.4.2 Gain

Subject	• Camera picture • Gray scale
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• IC7101 pin 27 (VIDLO)
Adjustment part	• VR7101 (Gain)
Specification	• "A"=2.7V(p-p) ± 0.05 V(p-p)

1) Observe waveform at pin 27 of the IC7101.
2) Adjust VR7101 so that level of "A" (see Fig. 3-4-3) of a waveform becomes 2.7 V(P-P) ± 0.05 V(p-p).

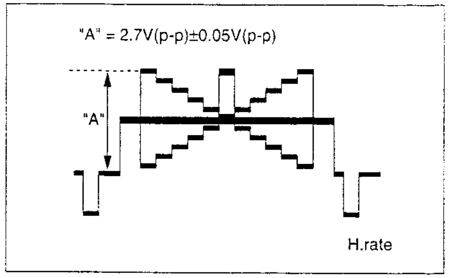


Fig. 3-4-3 Gain

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

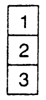
1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

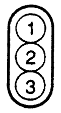
AUX : Active at high.

$\overline{\text{AUX}}$ or AUX(L) : Active at low.

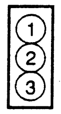
3. Interpreting Connector indications



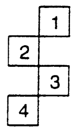
Removable connector



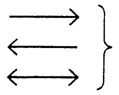
Wire soldered directly on board



Non-removable Board connector

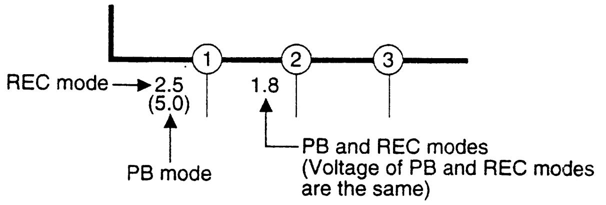


Board to Board


Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

1) Regulator (DC/DC CONV) circuits
   REC : Colour bar signal.
   PB : Alignment tape (Colour bar).
   — : Unmeasurable or unnecessary to measure.
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.

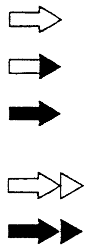

REC mode
2.5
(5.0)
1.8
①
②
③
PB mode
PB and REC modes
(Voltage of PB and REC modes are the same)

Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

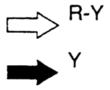
5. Signal path Symbols

The arrows indicate the signal path as follows.

NOTE : The arrow is DVC unique object.


Playback signal path
Playback and recording signal path
Recording signal path
(including E-E signal path)
Capstan servo path
Drum servo path

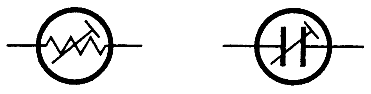
(Example)



Playback R-Y signal path
Recording Y signal path

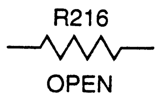
6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



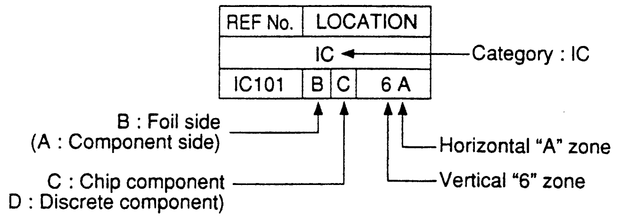
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

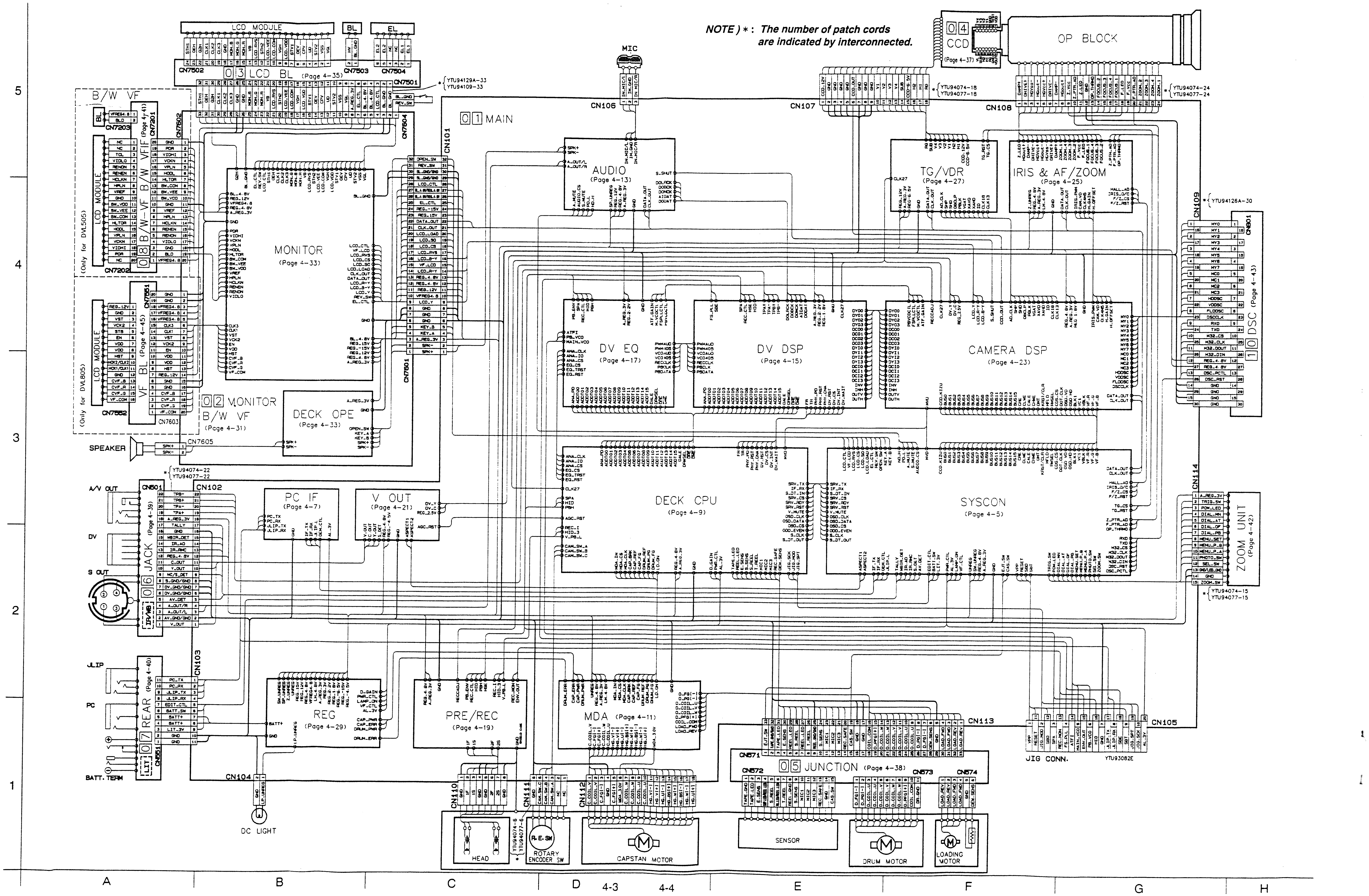
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.


REF No.
LOCATION
IC
IC101
B
C
6 A
Category : IC
B : Foil side
(A : Component side)
C : Chip component
D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

Note: For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS

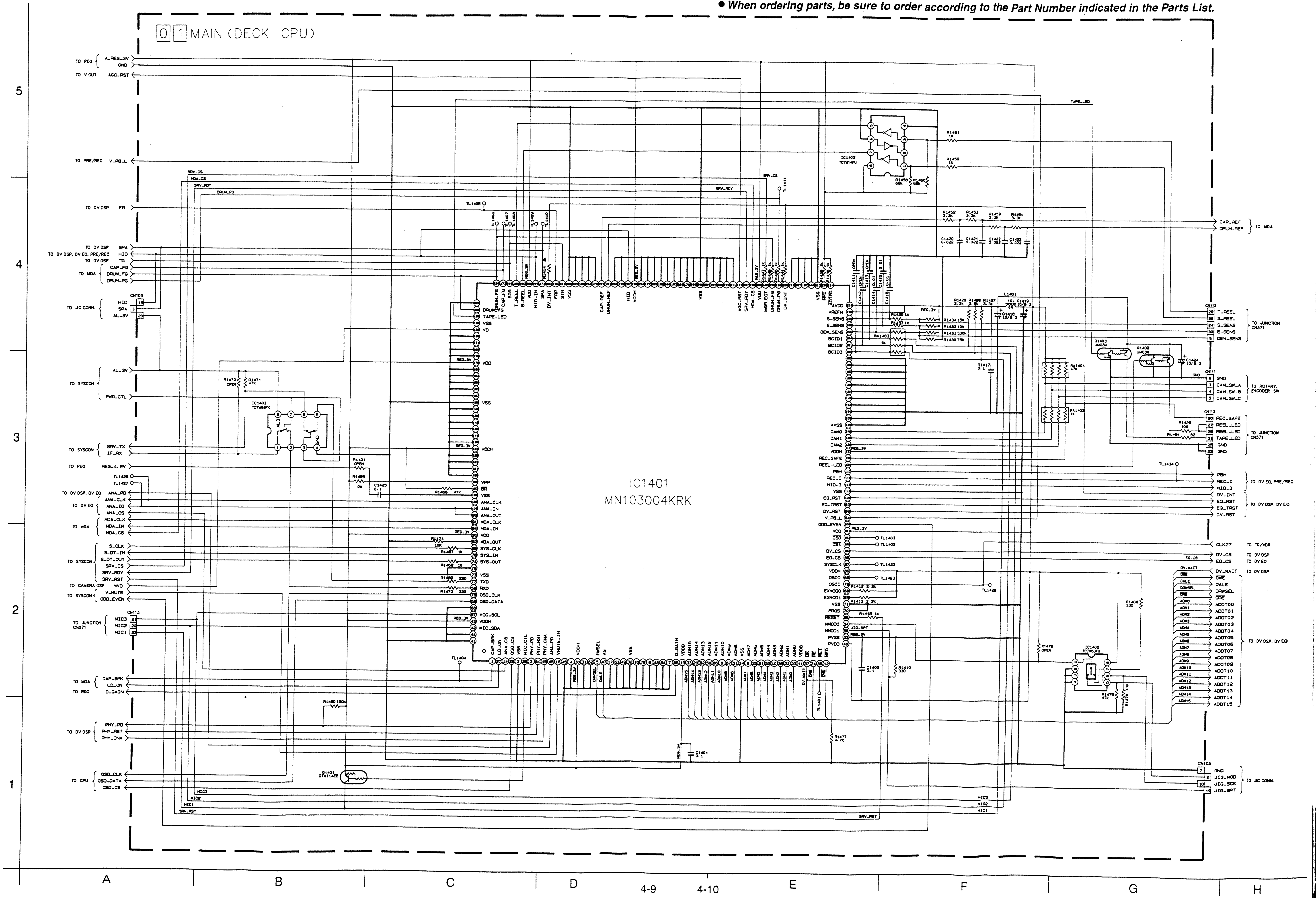


NOTE) * : The number of patch cords are indicated by interconnected.

LCD MODULE
BL
EL
CN7502
03 LCD BL (Page 4-35)
CN7503
CN7504
CN7501
YTU94129A-33
YTU94109-33
MIC
CN106
CN107
CN108
04 CCD (Page 4-37)
OP BLOCK
YTU94074-18
YTU94077-18
YTU94074-24
YTU94077-24
B/W VF
BL
CN7203
LCD MODULE
(Only for DVL505)
CN7202
08 B/W-VF B/W VFIF (Page 4-41)
CN7201
01 MAIN
CN101
AUDIO (Page 4-13)
TG/VDR (Page 4-27)
IRIS & AF/ZOOM (Page 4-25)
CN109
YTU94126A-30
CN801
10 DSC (Page 4-43)
MONITOR (Page 4-33)
LCD MODULE
(Only for DVL805)
CN7562
VF BL (Page 4-45)
CN7561
CN7603
02 MONITOR B/W VF (Page 4-31)
DECK OPE (Page 4-33)
DV EQ (Page 4-17)
DV DSP (Page 4-15)
CAMERA DSP (Page 4-23)
SPEAKER
CN7605
YTU94074-22
YTU94077-22
A/V OUT
CN501
CN102
DV
S OUT
06 JACK (Page 4-39)
PC IF (Page 4-7)
V OUT (Page 4-21)
DECK CPU (Page 4-9)
SYSCON (Page 4-5)
CN114
ZOOM UNIT (Page 4-42)
YTU94074-15
YTU94077-15
JLIP
PC
BATT. TERM
CN103
07 REAR (Page 4-40)
CN551
REG (Page 4-29)
PRE/REC (Page 4-19)
MDA (Page 4-11)
CN113
CN105
JIG CONN.
YTU93082E
CN104
DC LIGHT
CN571
CN572
05 JUNCTION (Page 4-38)
CN573
CN574
CN110
CN111
CN112
YTU94074-6
YTU94077-6
HEAD
R.E.SW
ROTARY ENCODER SW
CAPSTAN MOTOR
SENSOR
DRUM MOTOR
LOADING MOTOR
1
2
3
4
5
A
B
C
D
E
F
G
H

4.4 DECK CPU SCHEMATIC DIAGRAM

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (DECK CPU)
IC1401
MN103004KRK
IC1402
TC7W14FU
IC1403
TC7W66FK
IC1405
TC7W53FU
Q1401
DTA114EE
Q1402
UMC3N
Q1403
UMC3N
L1401
TO REG
A_REG_3V
GND
TO V OUT
AGC_RST
TO PRE/REC
V_PB_L
TO DV DSP
FR
SPA
HID
TR
TO DV DSP, DV EQ, PRE/REC
TO MDA
CAP_FG
DRUM_FG
DRUM_PG
TO JIG CONN.
CN105
AL_3V
TO SYSCON
PWR_CTL
SRV_TX
IF_RX
REG_4.8V
TL1426
TL1427
TO DV DSP, DV EQ
ANA_PO
ANA_CLK
TO DV EQ
ANA_IO
ANA_CS
MDA_CLK
MDA_IN
MDA_CS
S_CLK
S_DT_IN
S_DT_OUT
SRV_CS
SRV_RDY
SRV_RST
TO CAMERA DSP
MVD
V_MUTE
OSD_EVEN
TO JUNCTION CN571
CN113
MIC3
MIC2
MIC1
CAP_BRK
LD_ON
D_GAIN
PHY_PO
PHY_RST
PHY_CNA
TO CPU
OSD_CLK
OSD_DATA
OSD_CS
TAPE_LED
CAP_REF
DRUM_REF
TO MDA
T_REEL
S_REEL
S_SENS
E_SENS
DEW_SENS
GND
CN111
CAM_SW_A
CAM_SW_B
CAM_SW_C
TO ROTARY ENCODER SW
REC_SAFE
REEL_LED
TO JUNCTION CN571
PBH
REC_I
HID_3
DV_INT
EQ_RST
EQ_TRST
DV_RST
TO DV EQ, PRE/REC
TO DV DSP, DV EQ
CLK27
TO TC/VDR
DV_CS
TO DV DSP
EQ_CS
TO DV EQ
DV_WAIT
DALE
DPWSEL
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
TO DV DSP, DV EQ
JIG_MOD
JIG_SCK
JIG_SPT
TO JIG CONN.
AVDD
VREFH
BCID1
BCID2
BCID3
AVSS
CAM0
CAM1
CAM2
VDDH
VDD
VSS
VPP
SRV_RDY
MDA_CS
OSD_EVEN
CS0
CS1
SYSCLK
OSCO
OSCI
EXMOD0
EXMOD1
FRQS
RESET
MMOD0
MMOD1
PVSS
PVDD
MIC_SCL
MIC_SDA
SYS_CLK
SYS_IN
SYS_OUT
TXD
RXD
OSD_CLK
OSD_DATA
ANA_CLK
ANA_IN
ANA_OUT
MDA_CLK
MDA_IN
MDA_OUT
REG_3V
R1401 OPEN
R1405 0Ω
C1425 0.1
R1466 47k
R1472 OPEN
R1471 47k
R1474 10K
R1467 1k
R1468 1k
R1469 220
R1470 330
R1480 100k
R1451 1k
R1459 1k
R1458 68k
R1460 68k
R1452 3.3k
R1453 3.3k
R1450 3.3k
R1451 3.3k
C1420 0.022
C1421 0.022
C1422 0.022
C1423 0.022
R1429 3.3k
R1428 3.3k
R1427 3.3k
C1419 10/6.3
C1418 10/6.3
R1434 15k
R1432 10k
R1431 330k
R1430 75k
RA1403 1k
C1417 0.1
RA1401 47k
RA1402 1k
C1424 10/6.3
R1420 100
R1454 82
TL1434
TL1403
TL1402
TL1433
TL1423
TL1422
R1412 2.2k
R1413 2.2k
R1415 1k
C1402 0.1
R1410 330
R1478 OPEN
R1408 330
R1475 47k
R1476 330
R1477 4.7k
C1401 0.1
TL1401
TL1404
TL1405
TL1411
TL1406
TL1407
TL1408
TL1409
TL1410
A
B
C
D
E
F
G
H
1
2
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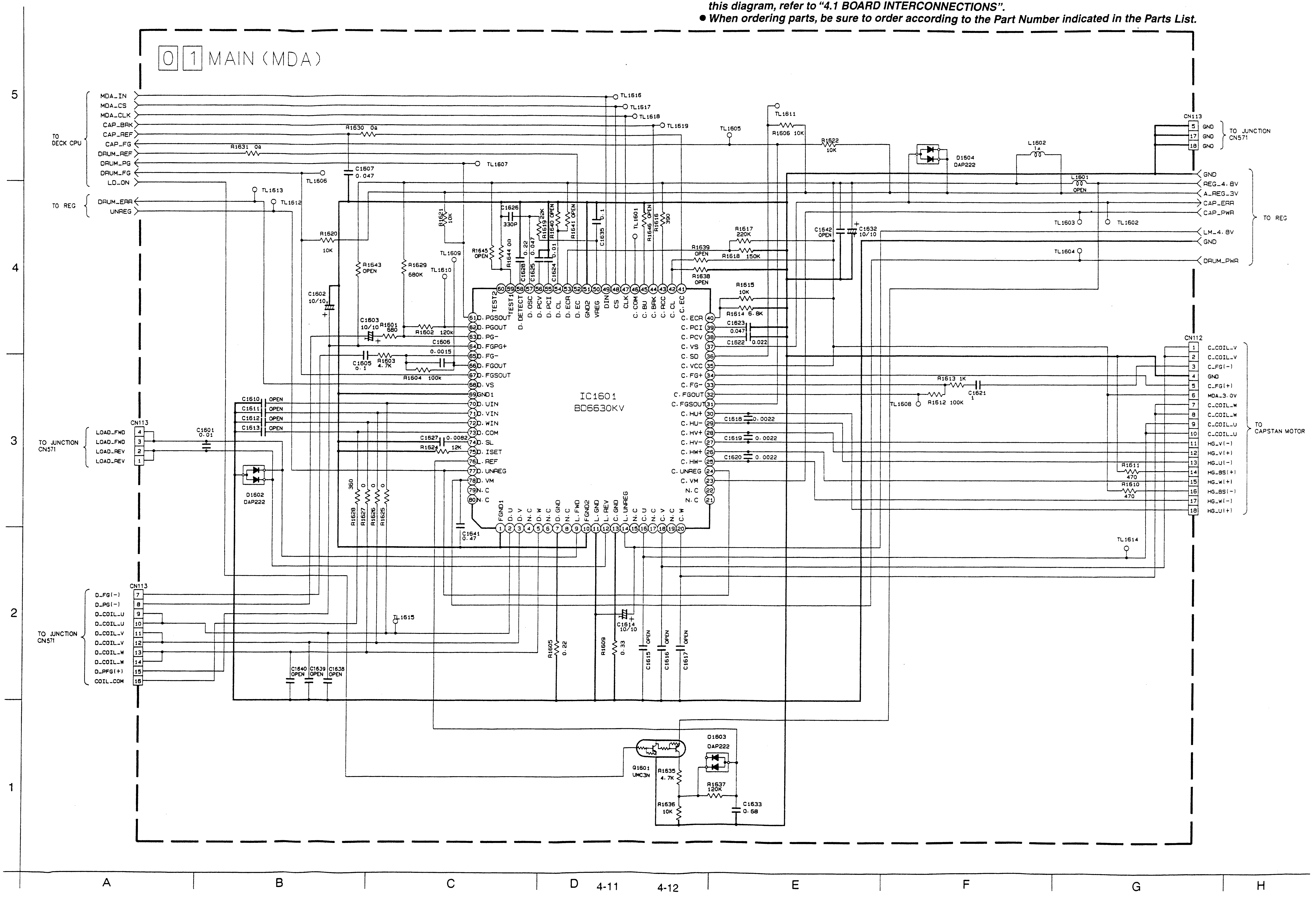
4
5

4.5 MDA SCHEMATIC DIAGRAM

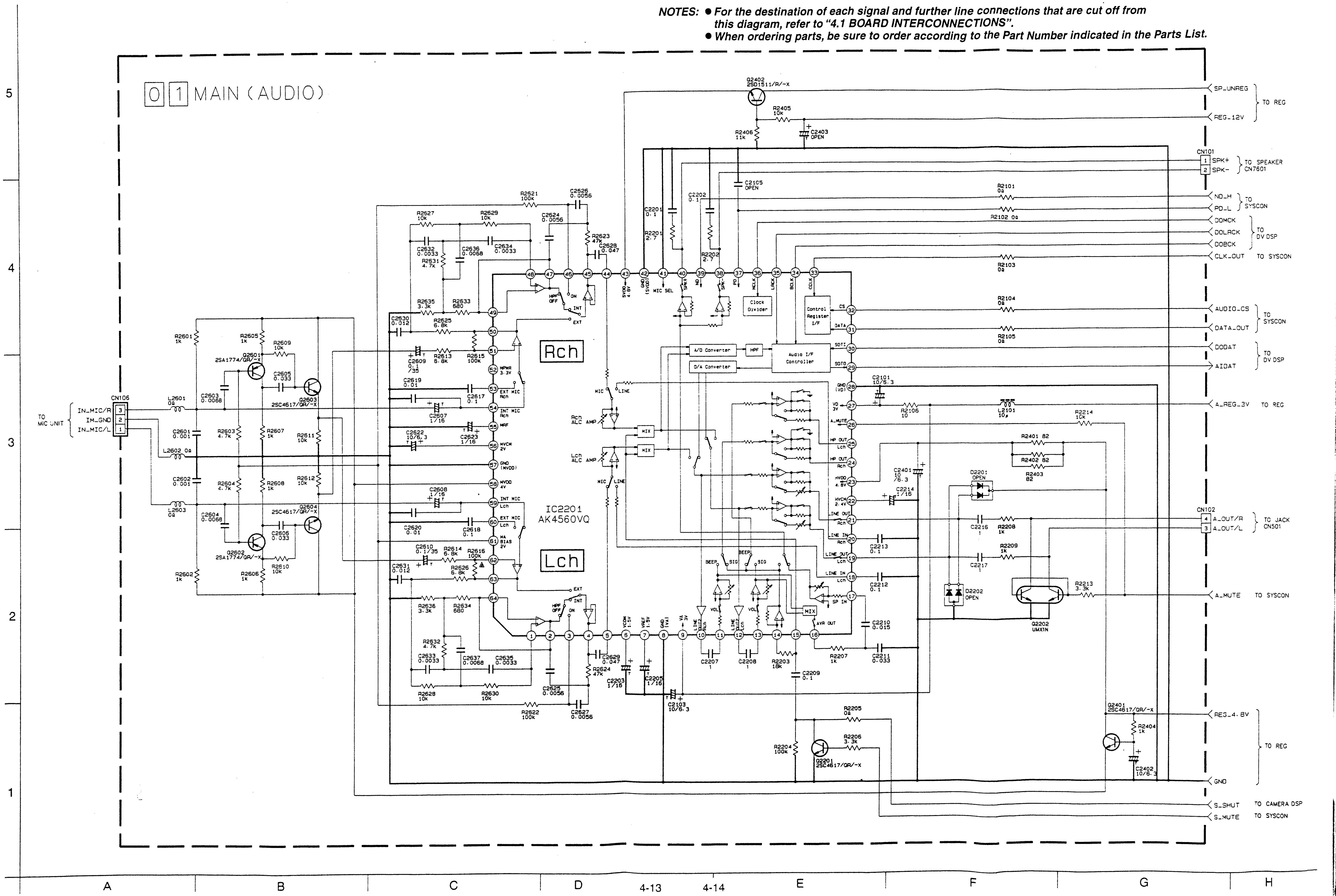
NOTES: ● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.


01 MAIN (MDA)
TO DECK CPU
MDA_IN
MDA_CS
MDA_CLK
CAP_BRK
CAP_REF
CAP_FG
DRUM_REF
DRUM_PG
DRUM_FG
LD_ON
TO REG
DRUM_ERR
UNREG
TL1616
TL1617
TL1618
TL1619
TL1605
TL1611
R1606 10K
R1622 10K
D1504 DAP222
L1602 1µ
L1601 OPEN
CN113
GND
GND
GND
TO JUNCTION CN571
GND
REG_4.8V
A_REG_3V
CAP_ERR
CAP_PWR
TO REG
LM_4.8V
GND
DRUM_PWR
TL1603
TL1602
TL1604
R1630 0Ω
R1631 0Ω
C1607 0.047
TL1607
TL1606
TL1613
TL1612
R1620 10K
R1643 OPEN
R1629 680K
R1621 10K
C1626 330P
R1645 OPEN
R1644 0Ω
C1628 0.22
C1625 0.047
R1619 22K
R1640 OPEN
C1624 0.01
R1641 OPEN
C1635 0.1
TL1601
R1646 OPEN
R1616 390
R1617 220K
R1639 OPEN
R1618 150K
R1638 OPEN
C1642 OPEN
C1632 10/10
R1615 10K
R1614 6.8K
C1623 0.047
C1622 0.022
TL1609
TL1610
C1602 10/10
C1603 10/10
R1601 680
R1602 120K
C1606 0.0015
C1605 0.1
R1603 4.7K
R1604 100K
IC1601
BD6630KV
TEST2
TEST1
D.DETECT
D.OSC
D.PCV
D.PCI
D.CL
D.ECR
D.EC
GND2
VREG
DIN
CS
CLK
C.COM
C.BU
C.BRK
C.RCC
C.CL
C.EC
D.PGSOUT
D.PGOUT
D.PG-
D.FGPG+
D.FG-
D.FGOUT
D.FGSOUT
D.VS
GND1
D.UIN
D.VIN
D.WIN
D.COM
D.SL
D.ISET
L.REF
D.UNREG
D.VM
N.C
N.C
C.ECR
C.PCI
C.PCV
C.VS
C.SD
C.VCC
C.FG+
C.FG-
C.FGOUT
C.FGSOUT
C.HU+
C.HU-
C.HV+
C.HV-
C.HW+
C.HW-
C.UNREG
C.VM
N.C
N.C
FGND1
D.U
D.V
N.C
D.W
N.C
D.GND
N.C
L.FWD
FGND2
L.GND
L.REV
C.GND
L.UNREG
N.C
C.U
N.C
C.V
N.C
C.W
C1610 OPEN
C1611 OPEN
C1612 OPEN
C1613 OPEN
C1627 0.0082
R1524 12K
C1618 0.0022
C1619 0.0022
C1620 0.0022
R1613 1K
C1621 1
TL1608
R1612 100K
CN112
C_COIL_V
C_COIL_V
C_FG(-)
GND
C_FG(+)
MDA_3.0V
C_COIL_W
C_COIL_W
C_COIL_U
C_COIL_U
HG_V(-)
HG_V(+)
HG_U(-)
HG_BS(+)
HG_W(+)
HG_BS(-)
HG_W(-)
HG_U(+)
TO CAPSTAN MOTOR
R1611 470
R1610 470
TO JUNCTION CN571
CN113
LOAD_FWD
LOAD_FWD
LOAD_REV
LOAD_REV
C1601 0.01
D1602 DAP222
R1628 360
R1627 0
R1626 0
R1625 0
C1641 0.47
TL1614
CN113
D_FG(-)
D_PG(-)
D_COIL_U
D_COIL_U
D_COIL_V
D_COIL_V
D_COIL_W
D_COIL_W
D_PFG(+)
COIL_COM
TO JUNCTION CN571
TL1615
C1640 OPEN
C1639 OPEN
C1638 OPEN
R1605 0.22
R1609 0.33
C1614 10/10
C1615 OPEN
C1616 OPEN
C1617 OPEN
Q1601 UMC3N
R1635 4.7K
R1636 10K
D1603 DAP222
R1637 120K
C1633 0.68
5
4
3
2
1
A
B
C
D
E
F
G
H

4.6 AUDIO SCHEMATIC DIAGRAM

NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***

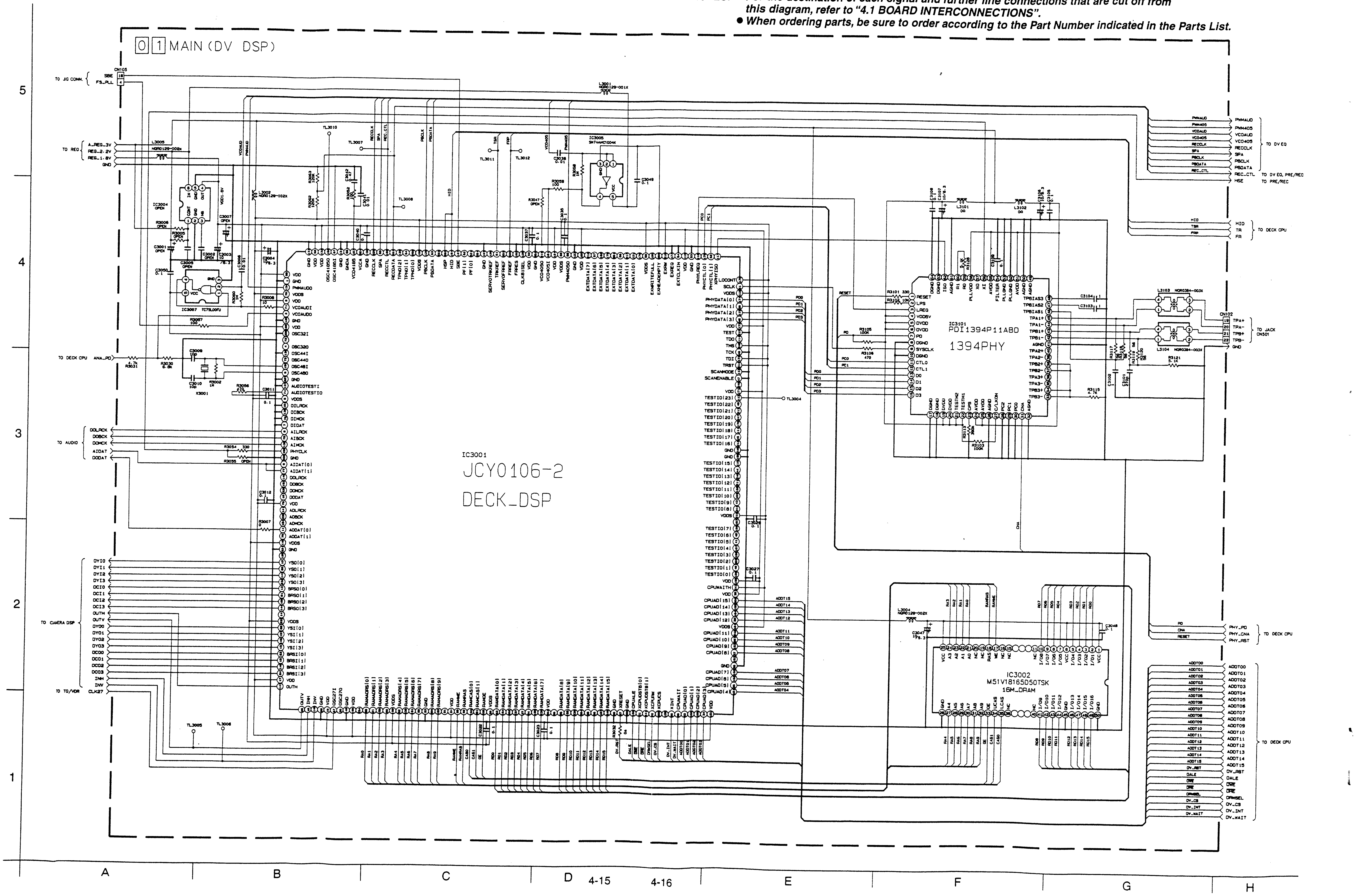
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



01 MAIN (AUDIO)
IC2201
AK4560VQ
Rch
Lch
CN106
IN_MIC/R
IM_GND
IN_MIC/L
TO MIC UNIT
Q2601 2SA1774/QR/-X
Q2602 2SA1774/QR/-X
Q2603 2SC4617/QR/-X
Q2604 2SC4617/QR/-X
Q2402 2SD1511/R/-X
Q2401 2SC4617/QR/-X
Q2201 2SC4617/QR/-X
Q2202 UMX1N
D2201 OPEN
D2202 OPEN
SP_UNREG
REG_12V
TO REG
CN101
SPK+
SPK-
TO SPEAKER CN7601
ND_H
PD_L
TO SYSCON
DOMCK
DOLRCK
DOBCK
TO DV DSP
CLK_OUT
TO SYSCON
AUDIO_CS
DATA_OUT
TO SYSCON
DODAT
AIDAT
TO DV DSP
A_REG_3V
TO REG
CN102
A_OUT/R
A_OUT/L
TO JACK CN501
A_MUTE
TO SYSCON
REG_4.8V
GND
TO REG
S_SHUT
TO CAMERA DSP
S_MUTE
TO SYSCON
Clock Divider
Control Register I/F
Audio I/F Controller
A/D Converter
D/A Converter
HPF
MIX
Rch ALC AMP
Lch ALC AMP
MIC
LINE
EXT MIC Rch
INT MIC Rch
EXT MIC Lch
INT MIC Lch
MIC BIAS 2V
NVCM 2V
GND (MVDD)
MVDD 4V
HPWR 3.3V
A_MUTE
HP OUT Lch
HP OUT Rch
HVDD 4.8V
HVCM 2.4V
LINE OUT Rch
LINE IN Rch
LINE OUT Lch
LINE IN Lch
SP IN
AVR OUT
BEEP
SIG
VOL
SVDD 4.8V
MIC SEL
VCOM 1.5V
VREF 1.5V
VA 3V
VD 3V
A
B
C
D
E
F
G
H
1
2
3
4
5

4.7 DV DSP SCHEMATIC DIAGRAM

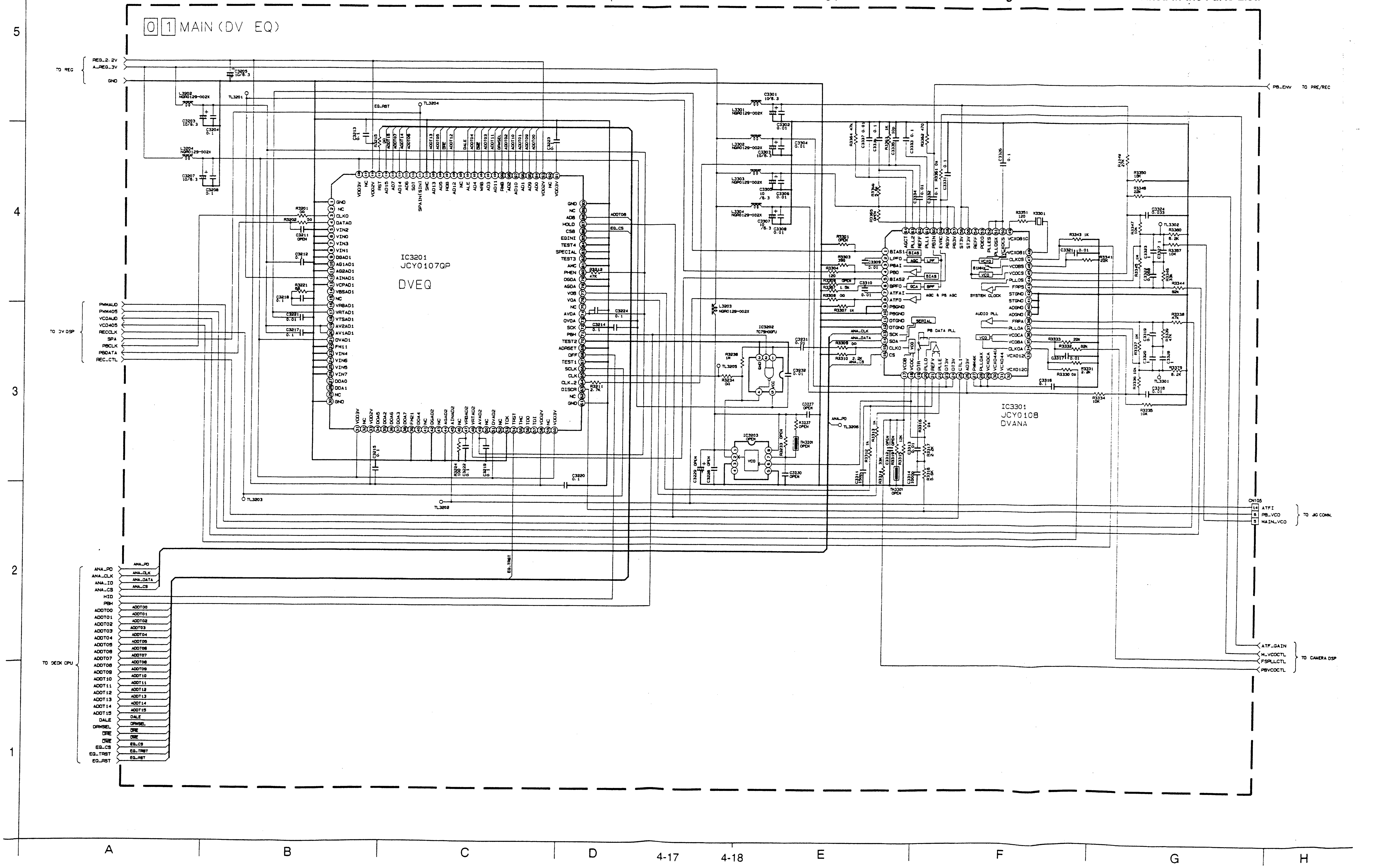
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



0 1 MAIN (DV DSP)
TO JIG CONN.
TO REG
A_REG_3V
REG_2.2V
REG_1.8V
GND
TO DECK CPU
ANA_PD
TO AUDIO
DOLRCK
DOBCK
DOMCK
AIDAT
DODAT
TO CAMERA DSP
TO TG/VDR
CLK27
IC3001
JCY0106-2
DECK_DSP
IC3101
PDI1394P11ABD
1394PHY
IC3002
M51V18165D50TSK
16M_DRAM
IC3004
IC3005
IC3007
X3001
TO DV EQ
TO DV EQ, PRE/REC
TO PRE/REC
TO DECK CPU
TO JACK CN501
CN102
TPA+
TPA-
TPB+
TPB-
PHY_PD
PHY_CNA
PHY_RST
DV_RST
DALE
DV_CS
DV_INT
DV_WAIT
1
2
3
4
5
A
B
C
D
E
F
G
H

4.8 DV EQ SCHEMATIC DIAGRAM

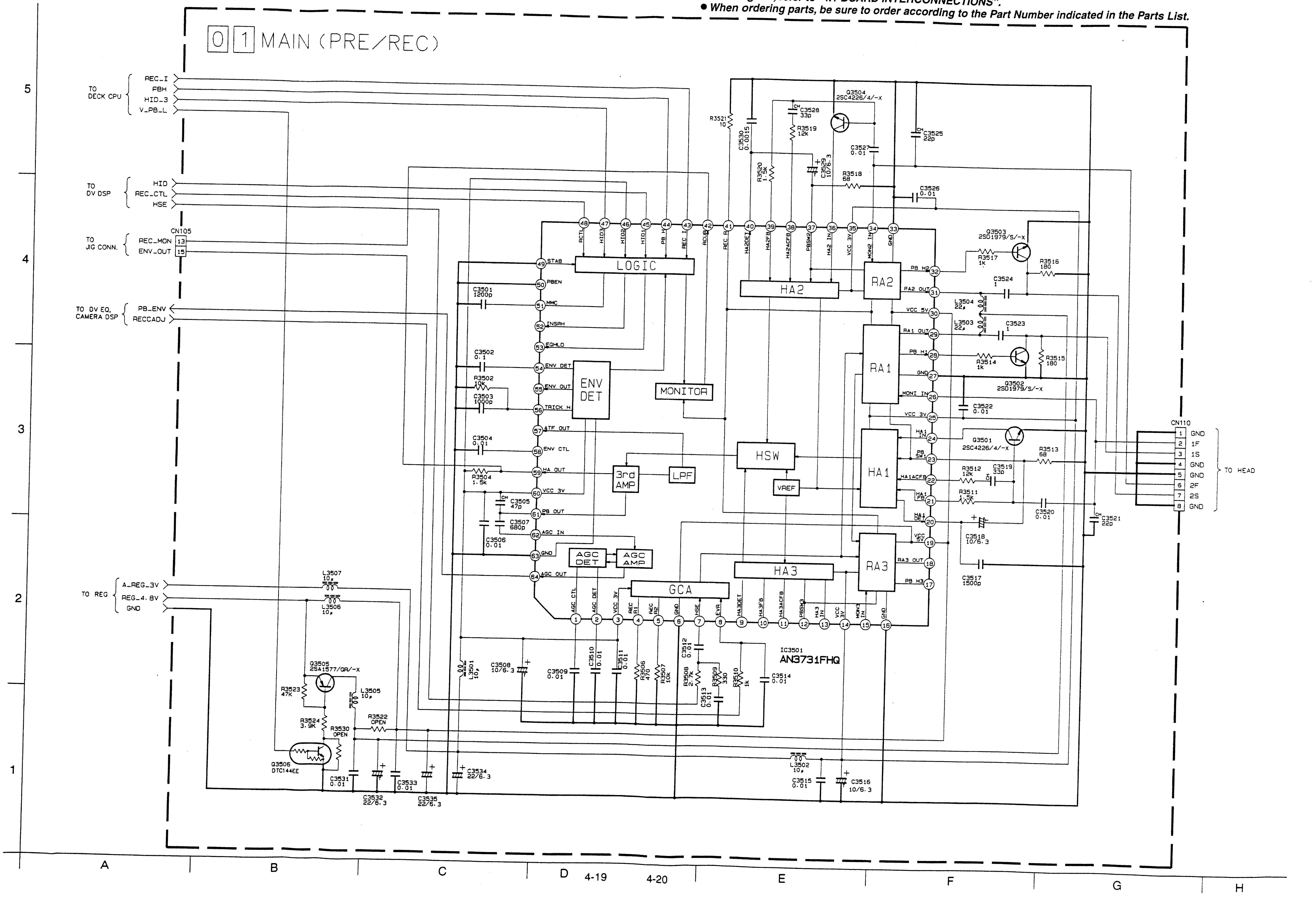
NOTES:
- *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
- *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (DV EQ)
TO REG
REG_2.2V
A_REG_3V
GND
IC3201
JCY0107QP
DVEQ
IC3301
JCY0108
DVANA
IC3202
TC75W00FU
IC3203
TO DV DSP
PWMAUD
PWM405
VCOAUD
VCO405
RECCLK
SPA
PBCLK
PBDATA
REC_CTL
TO DECK CPU
ANA_PD
ANA_CLK
ANA_IO
ANA_CS
HID
PBH
ADDT00
ADDT01
ADDT02
ADDT03
ADDT04
ADDT05
ADDT06
ADDT07
ADDT08
ADDT09
ADDT10
ADDT11
ADDT12
ADDT13
ADDT14
ADDT15
DALE
DRWSEL
ORE
OWE
EQ_CS
EQ_TRST
EQ_RST
PB_ENV
TO PRE/REC
CN105
ATFI
PB_VCO
MAIN_VCO
TO J/G CONN.
ATF_GAIN
M_VCOCTL
FSPLLCTL
PBVCOCTL
TO CAMERA DSP
5
4
3
2
1
A
B
C
D
E
F
G
H

4.9 PRE/REC SCHEMATIC DIAGRAM

NOTES:
- *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
- *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

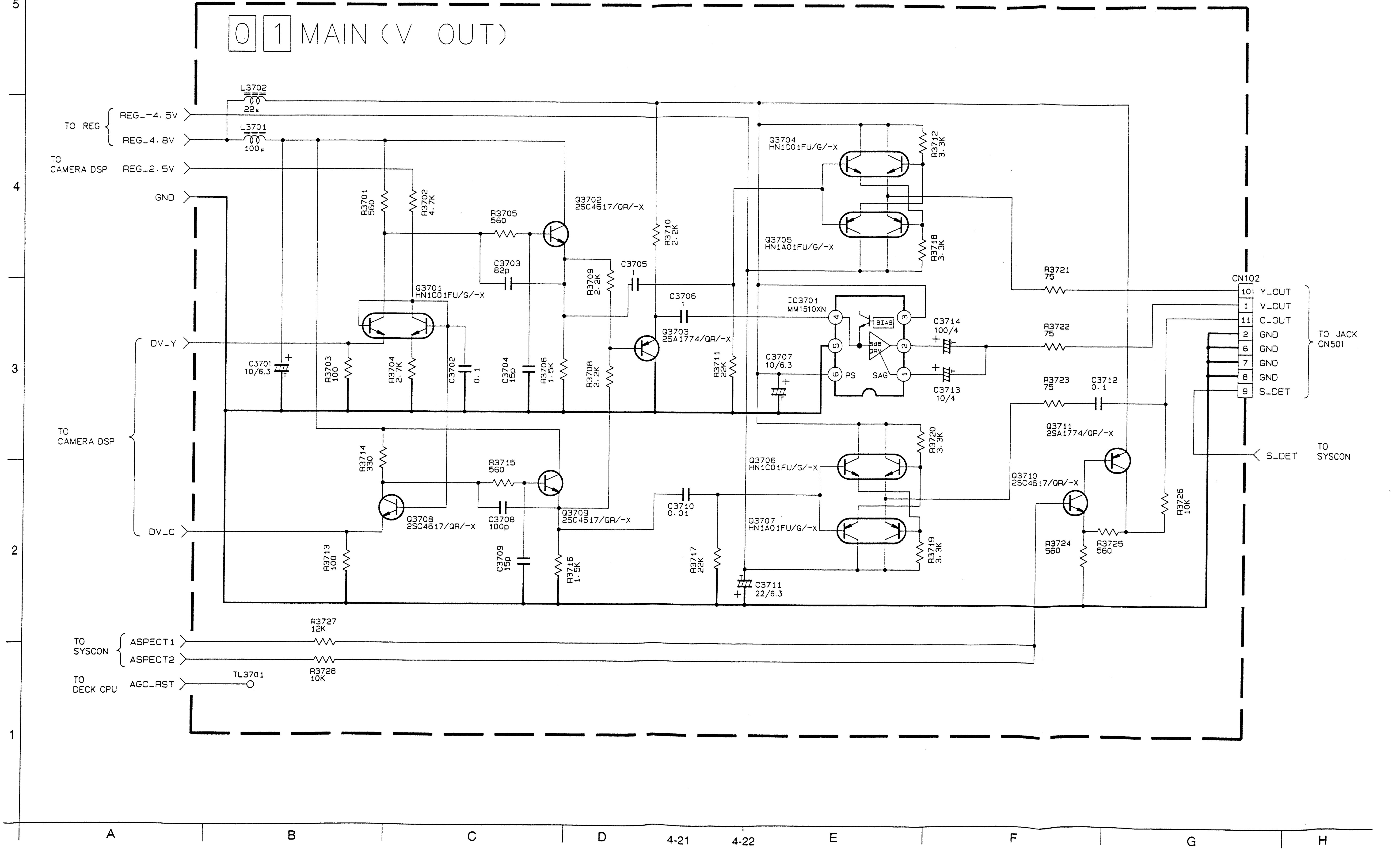


01 MAIN (PRE/REC)
TO DECK CPU
REC_I
PBH
HID_3
V_PB_L
TO DV DSP
HID
REC_CTL
HSE
TO JIG CONN.
CN105
REC_MON 13
ENV_OUT 15
TO DV EQ, CAMERA DSP
PB_ENV
RECCADJ
TO REG
A_REG_3V
REG_4.8V
GND
LOGIC
ENV DET
MONITOR
3rd AMP
LPF
HSW
VREF
AGC DET
AGC AMP
GCA
HA2
HA1
HA3
RA1
RA2
RA3
STAB
PBEN
MMC
INSRH
EQHLD
ENV DET
ENV OUT
TRICK H
ATF OUT
ENV CTL
HA OUT
VCC 3V
PB OUT
AGC IN
GND
AGC OUT
RCTL
HID3
HID2
HID1
PB H
REC I
RCUR
REC R
HA2DET
HA2FB
HA2ACFB
PBSW2
HA2 IN
VCC 3V
MON2 IN
GND
PB H2
PA2 OUT
VCC 5V
RA1 OUT
PB H1
GND
MONI IN
VCC 3V
HA1 IN
PB SW1
HA1ACFB
HA1 FB
HA1 DET
VCC 5V
RA3 OUT
PB H3
AGC CTL
AGC DET
VCC 3V
REC R1
REC R2
GND
HSE
EVR
HA3DET
HA3FB
HA3ACFB
PBSW3
HA3 IN
VCC 3V
MON3 IN
GND
IC3501
AN3731FHQ
Q3501 2SC4226/4/-X
Q3502 2SD1979/S/-X
Q3503 2SD1979/S/-X
Q3504 2SC4226/4/-X
Q3505 2SA1577/QR/-X
Q3506 DTC144EE
C3501 1200p
C3502 0.1
C3503 1000p
C3504 0.01
C3505 47p
C3506 0.01
C3507 680p
C3508 10/6.3
C3509 0.01
C3510 0.01
C3511 0.01
C3512 0.01
C3513 0.01
C3514 0.01
C3515 0.01
C3516 10/6.3
C3517 1500p
C3518 10/6.3
C3519 33p
C3520 0.01
C3521 22p
C3522 0.01
C3523 1
C3524 1
C3525 22p
C3526 0.01
C3527 0.01
C3528 33p
C3529 10/6.3
C3530 0.0015
C3531 0.01
C3532 22/6.3
C3533 0.01
C3534 22/6.3
C3535 22/6.3
R3502 10K
R3504 1.5K
R3506 470
R3507 10k
R3508 2.7k
R3509 330
R3510 1k
R3511 1.5K
R3512 12K
R3513 68
R3514 1K
R3515 180
R3516 180
R3517 1K
R3518 68
R3519 12K
R3520 1.5K
R3521 10
R3522 OPEN
R3523 47K
R3524 3.9K
R3530 OPEN
L3501 10μ
L3502 10μ
L3503 22μ
L3504 22μ
L3505 10μ
L3506 10μ
L3507 10μ
CH
CN110
1 GND
2 1F
3 1S
4 GND
5 GND
6 2F
7 2S
8 GND
TO HEAD
A
B
C
D
E
F
G
H
1
2
3
4
5

4.10 V OUT SCHEMATIC DIAGRAM

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*

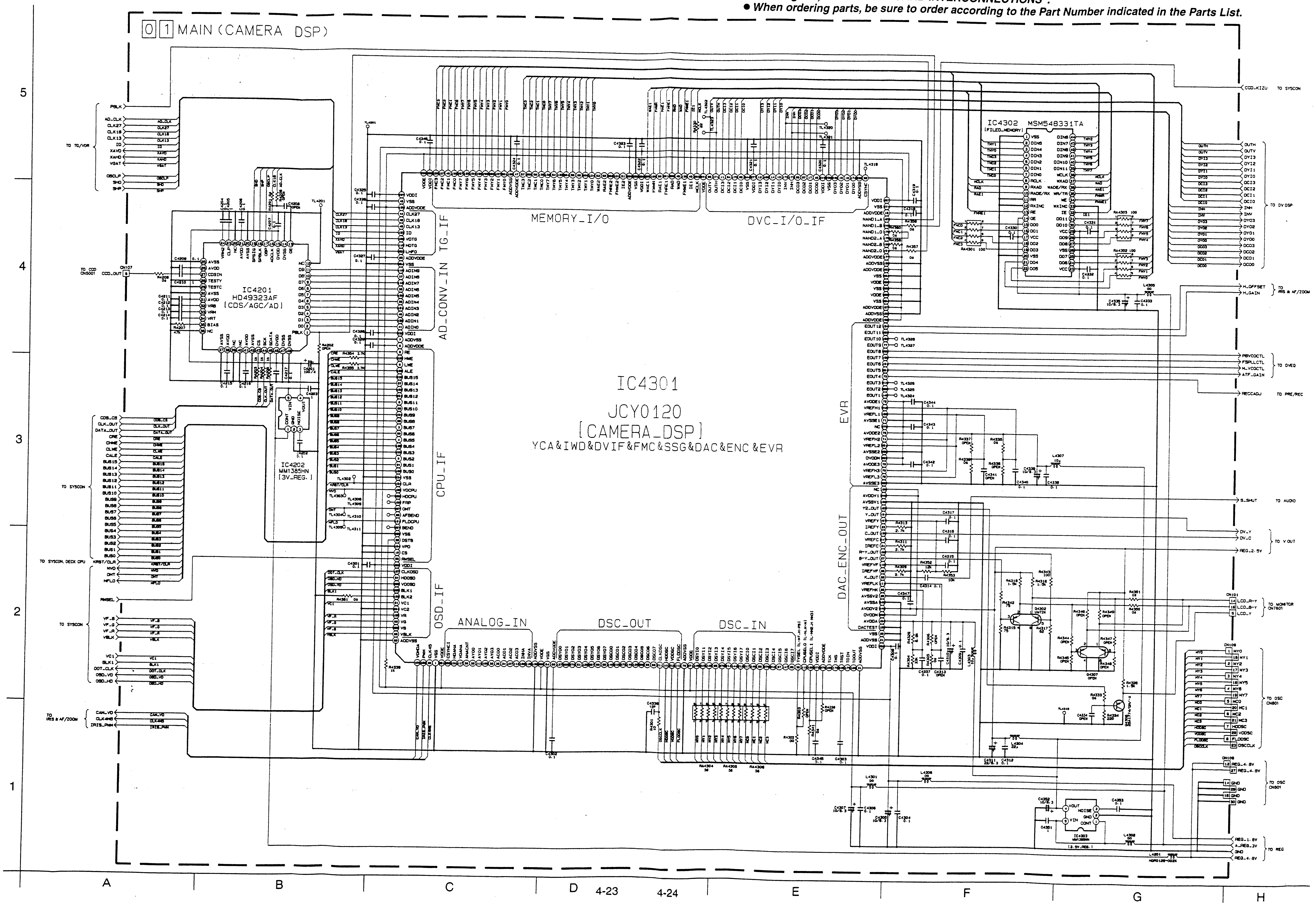
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (V OUT)
TO REG
REG_-4.5V
REG_4.8V
TO CAMERA DSP
REG_2.5V
GND
DV_Y
DV_C
TO CAMERA DSP
TO SYSCON
ASPECT1
ASPECT2
TO DECK CPU
AGC_RST
TL3701
L3702 22μ
L3701 100μ
R3701 560
R3702 4.7K
R3705 560
Q3702 2SC4617/QR/-X
C3703 82p
Q3701 HN1C01FU/G/-X
C3701 10/6.3
R3703 100
R3704 2.7K
C3702 0.1
C3704 15p
R3706 1.5K
R3709 2.2K
R3708 2.2K
C3705 1
R3710 2.2K
C3706 1
Q3703 2SA1774/QR/-X
R3711 22K
C3707 10/6.3
Q3704 HN1C01FU/G/-X
Q3705 HN1A01FU/G/-X
R3712 3.3K
R3718 3.3K
IC3701 MM1510XN
BIAS
6dB DRV
PS
SAG
C3714 100/4
C3713 10/4
R3721 75
R3722 75
R3723 75
C3712 0.1
Q3711 2SA1774/QR/-X
Q3710 2SC4617/QR/-X
R3726 10K
R3724 560
R3725 560
R3714 330
R3715 560
Q3709 2SC4617/QR/-X
Q3708 2SC4617/QR/-X
C3708 100p
C3709 15p
R3713 100
R3716 1.5K
C3710 0.01
R3717 22K
C3711 22/6.3
Q3706 HN1C01FU/G/-X
Q3707 HN1A01FU/G/-X
R3720 3.3K
R3719 3.3K
R3727 12K
R3728 10K
CN102
10 Y_OUT
1 V_OUT
11 C_OUT
2 GND
6 GND
7 GND
8 GND
9 S_DET
TO JACK CN501
S_DET
TO SYSCON
1
2
3
4
5
A
B
C
D
E
F
G
H

4.11 CAMERA DSP SCHEMATIC DIAGRAM

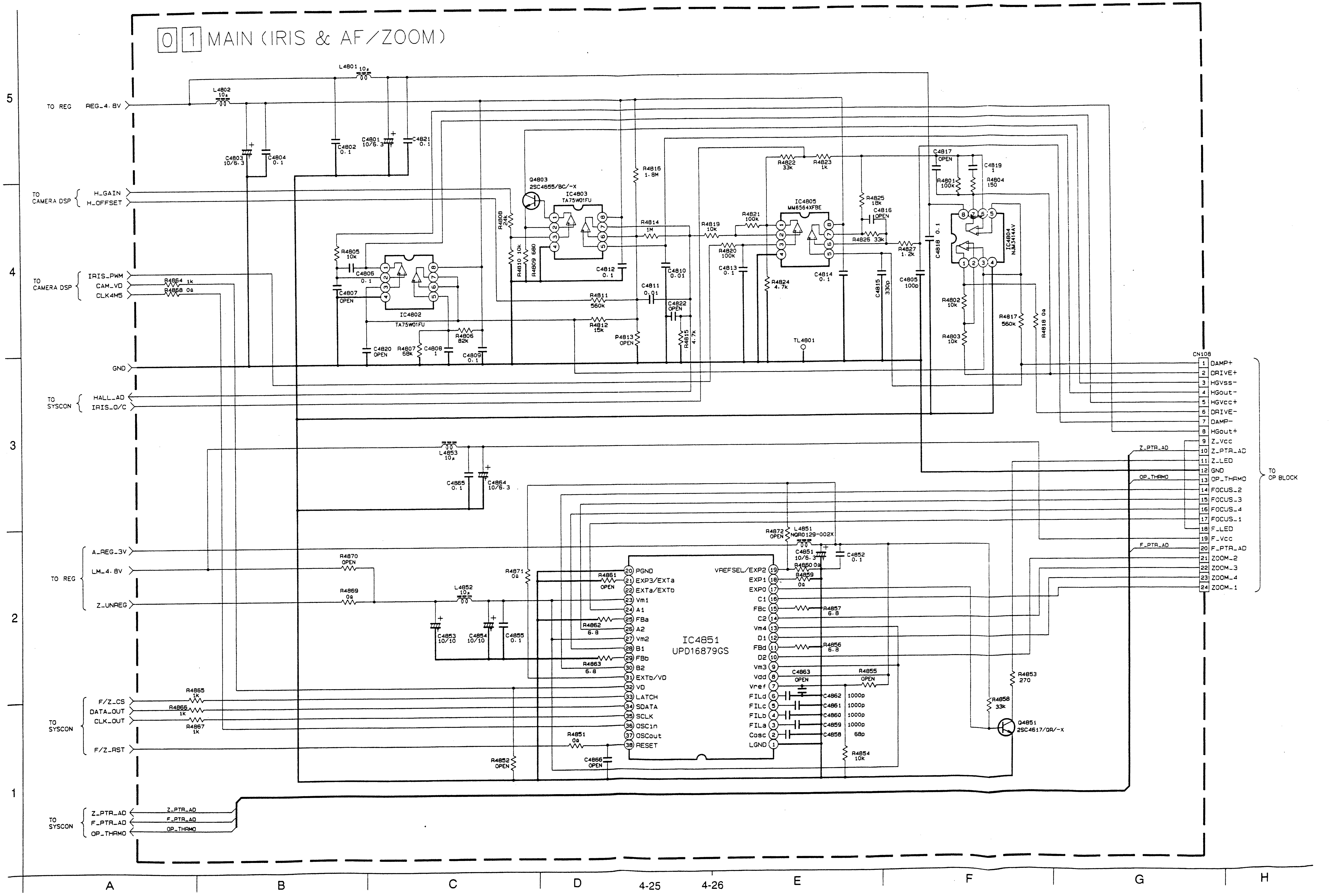
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (CAMERA DSP)
IC4301
JCY0120
[CAMERA_DSP]
YCA&IWD&DVIF&FMC&SSG&DAC&ENC&EVR
MEMORY_I/O
DVC_I/O_IF
TG_IF
AD_CONV_IN
CPU_IF
OSD_IF
ANALOG_IN
DSC_OUT
DSC_IN
EVR
DAC_ENC_OUT
IC4201
HD49323AF
[CDS/AGC/AD]
IC4202
MM1385HN
[3V_REG.]
IC4302 MSM548331TA
[FILED_MEMORY]
IC4303
MM1385HN
[2.5V_REG.]
TO TG/VDR
TO CCD CN5001
TO SYSCON
TO SYSCON, DECK CPU
TO IRIS & AF/ZOOM
CCD_KIZU
TO DV DSP
H_OFFSET
H_GAIN
TO IRIS & AF/ZOOM
PBVCOCTL
FSPLLCTL
H_VCOCTL
ATF_GAIN
TO DVEQ
RECCADJ
TO PRE/REC
S_SHUT
TO AUDIO
DV_Y
DV_C
REG_2.5V
TO V OUT
CN101
LCD_R-Y
LCD_B-Y
LCD_Y
TO MONITOR CN7601
CN109
TO DSC CN801
REG_4.8V
GND
REG_1.8V
A_REG_3V
REG_4.8V
TO REG
5
4
3
2
1
A
B
C
D
E
F
G
H

4.12 IRIS & AF/ZOOM SCHEMATIC DIAGRAM

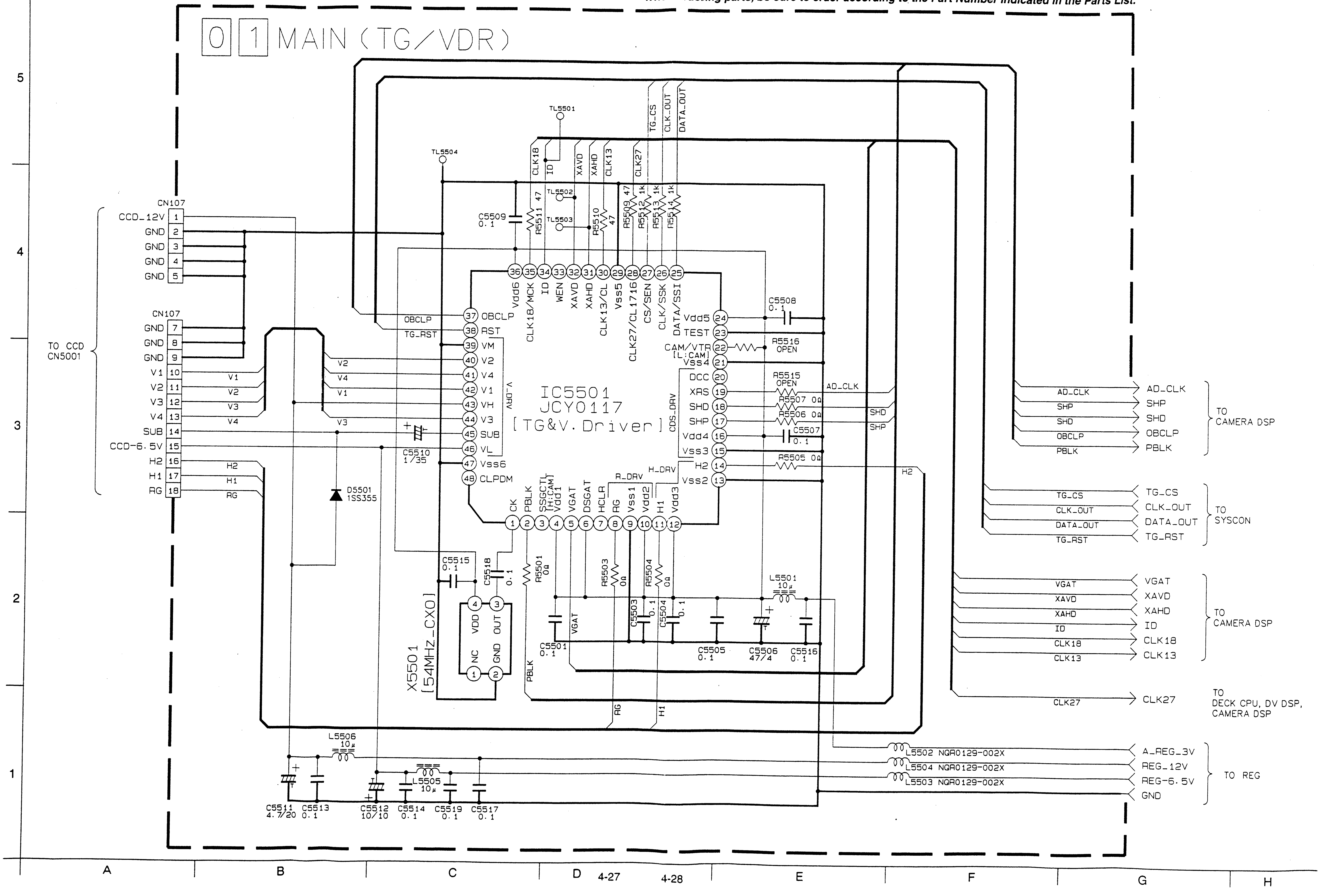
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (IRIS & AF/ZOOM)
TO REG
REG_4.8V
TO CAMERA DSP
H_GAIN
H_OFFSET
TO CAMERA DSP
IRIS_PWM
CAM_VD
CLK4M5
GND
TO SYSCON
HALL_AD
IRIS_O/C
TO REG
A_REG_3V
LM_4.8V
Z_UNREG
TO SYSCON
F/Z_CS
DATA_OUT
CLK_OUT
F/Z_RST
TO SYSCON
Z_PTR_AD
F_PTR_AD
OP_THRMO
L4801 10μ
L4802 10μ
C4803 10/6.3
C4804 0.1
C4802 0.1
C4801 10/6.3
C4821 0.1
Q4803 2SC4655/BC/-X
IC4803 TA75W01FU
R4808 24k
R4810 10k
R4809 680
R4816 1.8M
R4814 1M
C4812 0.1
C4810 0.01
C4811 0.01
C4822 OPEN
R4811 560k
R4812 15k
R4813 OPEN
R4815 4.7k
R4805 10k
C4806 0.1
C4807 OPEN
IC4802 TA75W01FU
R4806 82k
C4820 OPEN
R4807 68k
C4808 1
C4809 0.1
R4864 1k
R4868 0Ω
R4822 33k
R4823 1k
R4821 100k
R4819 10k
R4820 100k
C4813 0.1
R4824 4.7k
IC4805 MM6564XFBE
R4825 18k
C4816 OPEN
R4826 33k
C4814 0.1
C4815 330p
R4827 1.2k
C4805 100p
C4818 0.1
TL4801
C4817 OPEN
R4801 100k
C4819 1
R4804 150
IC4804 NJM3414AV
R4802 10k
R4803 10k
R4817 560k
R4818 0Ω
CN108
1 DAMP+
2 DRIVE+
3 HGVss-
4 HGout-
5 HGVcc+
6 DRIVE-
7 DAMP-
8 HGout+
9 Z_Vcc
10 Z_PTR_AD
11 Z_LED
12 GND
13 OP_THRMO
14 FOCUS_2
15 FOCUS_3
16 FOCUS_4
17 FOCUS_1
18 F_LED
19 F_Vcc
20 F_PTR_AD
21 ZOOM_2
22 ZOOM_3
23 ZOOM_4
24 ZOOM_1
TO OP BLOCK
Z_PTR_AD
OP_THRMO
F_PTR_AD
L4853 10μ
C4865 0.1
C4864 10/6.3
R4870 OPEN
R4869 0Ω
L4852 10μ
C4853 10/10
C4854 10/10
C4855 0.1
R4871 0Ω
R4861 OPEN
R4862 6.8
R4863 6.8
R4865 1k
R4866 1k
R4867 1k
R4851 0Ω
R4852 OPEN
C4866 OPEN
R4872 OPEN
L4851 NQR0129-002X
C4851 10/6.3
C4852 0.1
R4860 0Ω
R4859 0Ω
R4857 6.8
R4856 6.8
C4863 OPEN
R4855 OPEN
C4862 1000p
C4861 1000p
C4860 1000p
C4859 1000p
C4858 68p
R4854 10k
R4853 270
R4858 33k
Q4851 2SC4617/QR/-X
IC4851 UPD16879GS
20 PGND
21 EXP3/EXTa
22 EXTa/EXTb
23 Vm1
24 A1
25 FBa
26 A2
27 Vm2
28 B1
29 FBb
30 B2
31 EXTb/VD
32 VD
33 LATCH
34 SDATA
35 SCLK
36 OSCin
37 OSCout
38 RESET
19 VREFSEL/EXP2
18 EXP1
17 EXP0
16 C1
15 FBc
14 C2
13 Vm4
12 D1
11 FBd
10 D2
9 Vm3
8 Vdd
7 Vref
6 FILd
5 FILc
4 FILb
3 FILa
2 Cosc
1 LGND
5
4
3
2
1
A
B
C
D
E
F
G
H

4.13 TG/VDR SCHEMATIC DIAGRAM

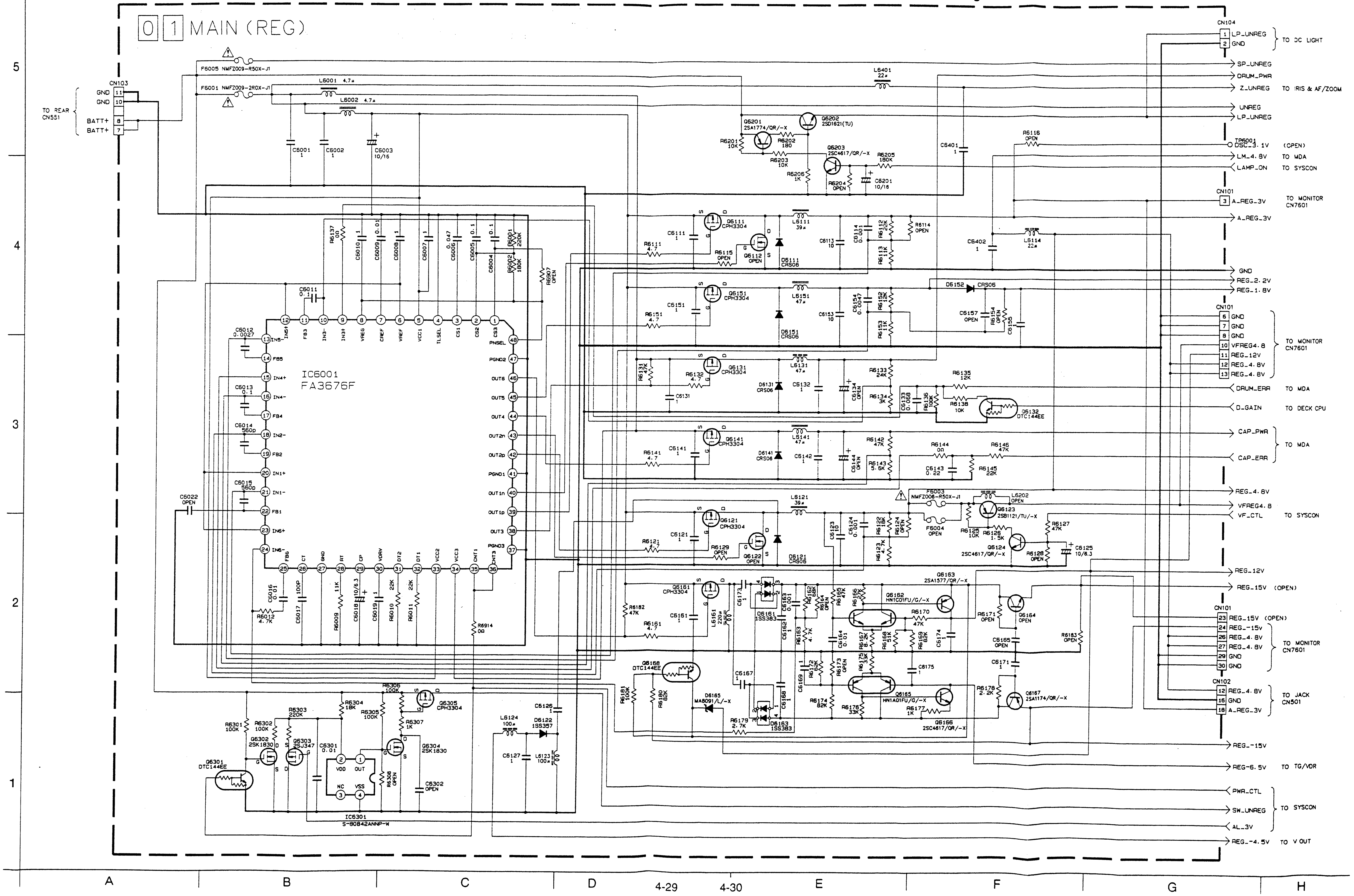
NOTES: ● ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
● ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



01 MAIN (TG/VDR)
CN107
CCD_12V 1
GND 2
GND 3
GND 4
GND 5
CN107
GND 7
GND 8
GND 9
V1 10
V2 11
V3 12
V4 13
SUB 14
CCD-6.5V 15
H2 16
H1 17
RG 18
TO CCD CN5001
V1
V2
V3
V4
H2
H1
RG
D5501 1SS355
TL5504
TL5501
TL5502
TL5503
C5509 0.1
R5511 47
R5510 47
R5509 47
R5512 1k
R5513 1k
R5514 1k
CLK18
ID
XAVD
XAHD
CLK13
CLK27
TG_CS
CLK_OUT
DATA_OUT
IC5501
JCY0117
[TG&V.Driver]
36 Vdd6
35 CLK18/MCK
34 ID
33 WEN
32 XAVD
31 XAHD
30 CLK13/CL
29 Vss5
28 CLK27/CL1716
27 CS/SEN
26 CLK/SSK
25 DATA/SSI
37 OBCLP
38 RST
39 VM
40 V2
41 V4
42 V1
43 VH
44 V3
45 SUB
46 VL
47 Vss6
48 CLPDM
24 Vdd5
23 TEST
22 CAM/VTR [L:CAM]
21 Vss4
20 DCC
19 XRS
18 SHD
17 SHP
16 Vdd4
15 Vss3
14 H2
13 Vss2
1 CK
2 PBLK
3 SSGCTL [H:CAM]
4 Vdd1
5 VGAT
6 DSGAT
7 HCLR
8 RG
9 Vss1
10 Vdd2
11 H1
12 Vdd3
OBCLP
TG_RST
V2
V4
V1
V3
V_DRV
CDS_DRV
H_DRV
R_DRV
C5510 1/35
C5508 0.1
R5516 OPEN
R5515 OPEN
R5507 0Ω
R5506 0Ω
C5507 0.1
R5505 0Ω
AD_CLK
SHD
SHP
H2
C5515 0.1
C5518 0.1
R5501 0Ω
R5503 0Ω
R5504 0Ω
X5501 [54MHz_CXO]
4 VDD
3 OUT
1 NC
2 GND
C5501 0.1
VGAT
C5503 0.1
C5504 0.1
C5505 0.1
L5501 10μ
C5506 47/4
C5516 0.1
PBLK
RG
H1
AD_CLK
SHP
SHD
OBCLP
PBLK
TO CAMERA DSP
TG_CS
CLK_OUT
DATA_OUT
TG_RST
TO SYSCON
VGAT
XAVD
XAHD
ID
CLK18
CLK13
TO CAMERA DSP
CLK27
TO DECK CPU, DV DSP, CAMERA DSP
L5502 NQR0129-002X
L5504 NQR0129-002X
L5503 NQR0129-002X
A_REG_3V
REG_12V
REG-6.5V
GND
TO REG
L5506 10μ
C5511 4.7/20
C5513 0.1
C5512 10/10
C5514 0.1
L5505 10μ
C5519 0.1
C5517 0.1
1
2
3
4
5
A
B
C
D
E
F
G
H

4.14 REGULATOR SCHEMATIC DIAGRAM

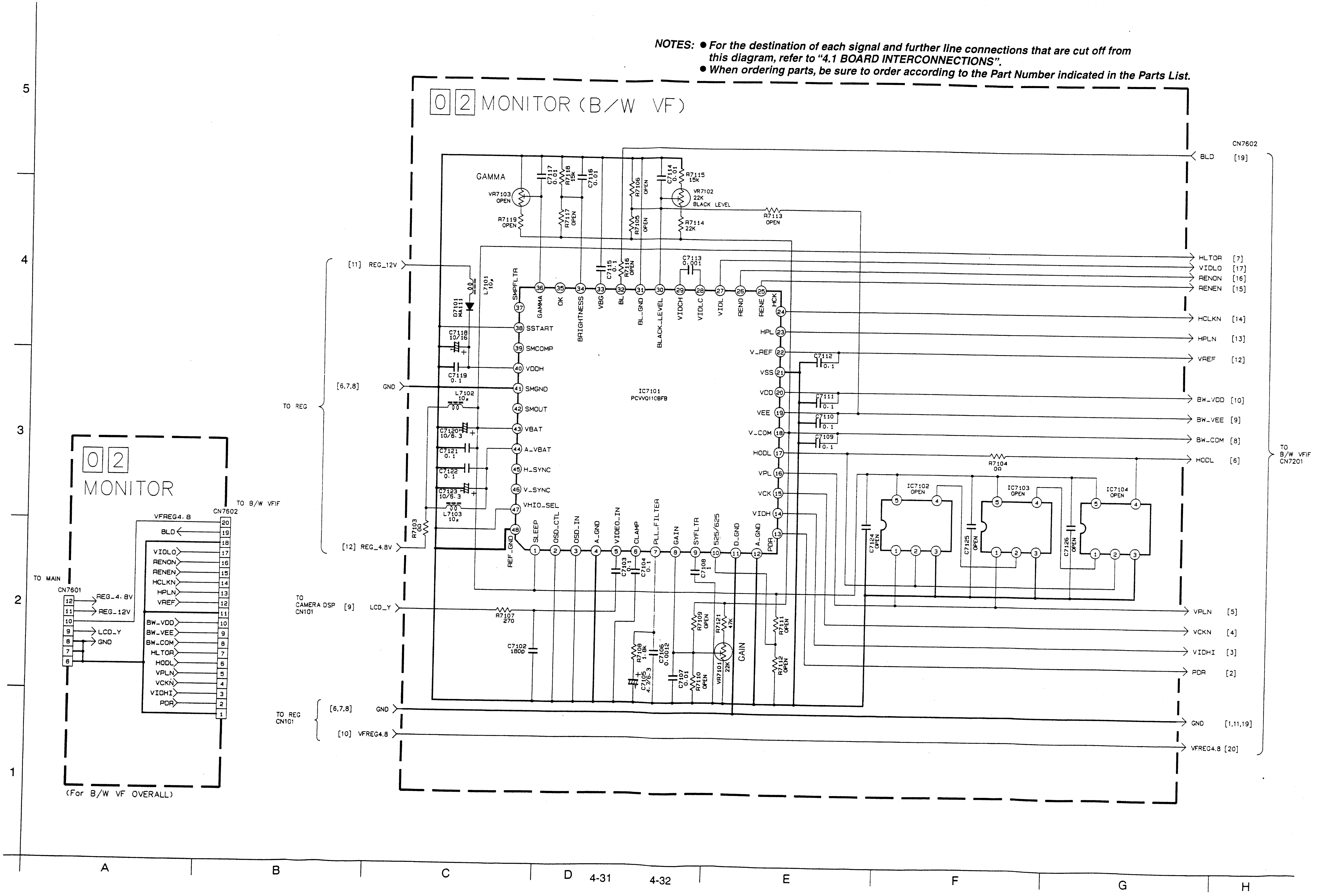
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



0 1 MAIN (REG)
TO REAR CN551
CN103
GND 11
GND 10
BATT+ 8
BATT+ 7
F6005 NMFZ009-R50X-J1
F6001 NMFZ009-2R0X-J1
L6001 4.7µ
L6002 4.7µ
C6001 1
C6002 1
C6003 10/16
L6401 22µ
Q6201 2SA1774/QR/-X
Q6202 2SD1621(TU)
R6201 10K
R6202 180
R6203 10K
Q6203 2SC4617/QR/-X
R6205 180K
R6206 1K
R6204 OPEN
C6201 10/16
C6401 1
R6116 OPEN
IC6001 FA3676F
IN5+ FB5 IN4+ IN4- FB4 IN2- FB2 IN1+ IN1- FB1 IN6+ IN6-
IN5- FB3 IN3- IN3+ VREG CREF VREF VCC1 TLSEL CS1 CS2 CS3
PNSEL PGND2 OUT6 OUT5 OUT4 OUT2n OUT2p PGND1 OUT1n OUT1p OUT3 PGND3
FB6 CT GND RT CP VDRV DT2 DT1 VCC2 VCC3 CNT1 CNT3
R6137 0Ω
C6010 1
C6009 0.01
C6008 1
C6007 1
C6006 0.047
C6005 0.1
C6004 0.1
R6002 180K
R6001 220K
R6907 OPEN
C6011 0.1
C6012 0.0027
C6013 0.1
C6014 560p
C6015 560p
C6022 OPEN
C6016 0.01
C6017 100P
R6009 11K
C6018 10/6.3
C6019 1
R6010 22K
R6011 22K
R6012 4.7K
R6914 0Ω
Q6111 CPH3304
Q6112 OPEN
R6111 4.7
C6111 1
R6115 OPEN
D6111 CRS06
L6111 39µ
C6113 10
C6114 0.001
R6112 22K
R6113 11K
R6114 OPEN
Q6151 CPH3304
R6151 4.7
C6151 1
L6151 47µ
D6151 CRS06
C6153 10
C6154 0.0047
R6152 12K
R6153 11K
D6152 CRS06
C6157 OPEN
R6154 OPEN
C6155 1
C6402 1
L6114 22µ
Q6131 CPH3304
R6131 47K
R6132 4.7
C6131 1
L6131 47µ
D6131 CRS06
C6132 1
C6134 OPEN
R6133 24K
R6134 3K
C6133 0.068
R6136 10K
R6135 12K
R6138 10K
Q6132 DTC144EE
Q6141 CPH3304
R6141 4.7
C6141 1
L6141 47µ
D6141 CRS06
C6142 1
C6144 OPEN
R6142 47K
R6143 5.6K
R6144 0Ω
C6143 0.22
R6146 47K
R6145 22K
Q6121 CPH3304
Q6122 OPEN
R6121 4.7
C6121 1
R6129 OPEN
L6121 39µ
D6121 CRS06
C6123 10
C6124 0.001
R6122 18K
R6124 OPEN
R6123 4.7K
F6003 NMFZ006-R50X-J1
L6202 OPEN
F6004 OPEN
Q6123 2SB1121/TU/-X
R6125 10K
R6126 1.5K
Q6124 2SC4617/QR/-X
R6127 47K
R6128 OPEN
C6125 10/6.3
Q6161 CPH3304
R6182 47K
R6161 4.7
C6161 1
L6161 220µ
C6173 1
D6161 1SS383
C6163 0.001
C6162 1
R6162 68K
R6164 OPEN
R6163 4.7K
R6165 47K
R6166 47K
Q6163 2SA1577/QR/-X
Q6162 HN1C01FU/G/-X
R6170 47K
C6164 0.01
R6167 8.2K
R6168 51K
R6169 82K
C6174 1
R6171 OPEN
Q6164 OPEN
C6165 OPEN
R6183 OPEN
C6171 1
Q6168 DTC144EE
R6181 100K
R6180 82K
D6165 MA8091/L/-X
C6167 1
C6169 1
R6172 62K
R6173 OPEN
R6175 33K
C6175 1
C6166 1
R6179 2.7K
D6163 1SS383
R6174 82K
R6176 33K
Q6165 HN1A01FU/G/-X
R6177 1K
Q6166 2SC4617/QR/-X
R6178 2.2K
Q6167 2SA1174/QR/-X
R6306 100K
R6304 18K
R6303 220K
R6305 100K
Q6305 CPH3304
R6307 1K
R6301 100K
R6302 100K
Q6302 2SK1830
Q6303 2SJ347
C6301 0.01
Q6304 2SK1830
R6308 OPEN
C6302 OPEN
Q6301 DTC144EE
IC6301 S-80842ANNP-W
VDD OUT NC VSS
L6124 100µ
C6126 1
D6122 1SS357
C6127 1
L6123 100µ
CN104
1 LP_UNREG
2 GND
TO DC LIGHT
SP_UNREG
DRUM_PWR
Z_UNREG TO IRIS & AF/ZOOM
UNREG
LP_UNREG
TP6001 DSC_3.1V (OPEN)
LM_4.8V TO MDA
LAMP_ON TO SYSCON
CN101
3 A_REG_3V TO MONITOR CN7601
A_REG_3V
GND
REG_2.2V
REG_1.8V
CN101
6 GND
7 GND
8 GND
10 VFREG4.8
11 REG_12V
12 REG_4.8V
13 REG_4.8V
TO MONITOR CN7601
DRUM_ERR TO MDA
D_GAIN TO DECK CPU
CAP_PWR
CAP_ERR
TO MDA
REG_4.8V
VFREG4.8
VF_CTL TO SYSCON
REG_12V
REG_15V (OPEN)
CN101
23 REG_15V (OPEN)
24 REG_-15V
26 REG_4.8V
27 REG_4.8V
29 GND
30 GND
TO MONITOR CN7601
CN102
12 REG_4.8V
16 GND
18 A_REG_3V
TO JACK CN501
REG_-15V
REG-6.5V TO TG/VDR
PWR_CTL
SW_UNREG
AL_3V
TO SYSCON
REG_-4.5V TO V OUT
5
4
3
2
1
A
B
C
D
E
F
G
H

4.15 B/W VF SCHEMATIC DIAGRAM

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



02 MONITOR (B/W VF)
02 MONITOR
(For B/W VF OVERALL)
TO MAIN
CN7601
REG_4.8V
REG_12V
LCD_Y
GND
TO B/W VFIF
CN7602
VFREG4.8
BLD
VIDLO
RENON
RENEN
HCLKN
HPLN
VREF
BW_VDD
BW_VEE
BW_COM
HLTOR
HODL
VPLN
VCKN
VIDHI
PDR
TO REG
[11] REG_12V
[6,7,8] GND
[12] REG_4.8V
TO CAMERA DSP CN101
[9] LCD_Y
TO REG CN101
[6,7,8] GND
[10] VFREG4.8
GAMMA
VR7103 OPEN
R7119 OPEN
C7117 0.01
R7118 15k
C7116 0.01
R7117 OPEN
R7106 OPEN
R7105 OPEN
C7114 0.01
R7115 15k
VR7102 22K BLACK LEVEL
R7114 22K
R7113 OPEN
C7115 0.1
R7116 OPEN
C7113 0.001
L7101 10µ
D7101 MA111
C7118 10/16
C7119 0.1
L7102 10µ
C7120 10/6.3
C7121 0.1
C7122 0.1
C7123 10/6.3
L7103 10µ
R7103 0Ω
IC7101
PCVVQ11C8FB
SMPFLTR
GAMMA
OK
BRIGHTNESS
VBG
BL
BL_GND
BLACK_LEVEL
VIDCH
VIDLC
VIDL
RENO
RENE
HCK
SSTART
SMCOMP
VDDH
SMGND
SMOUT
VBAT
A_VBAT
H_SYNC
V_SYNC
VHIO_SEL
REF_GND
SLEEP
OSD_CTL
OSD_IN
A_GND
VIDEO_IN
CLAMP
PLL_FILTER
GAIN
SYFLTR
525/625
D_GND
A_GND
PDR
VIDH
VCK
VPL
HODL
V_COM
VEE
VDD
VSS
V_REF
HPL
C7112 0.1
C7111 0.1
C7110 0.1
C7109 0.1
R7104 0Ω
IC7102 OPEN
IC7103 OPEN
IC7104 OPEN
C7124 OPEN
C7125 OPEN
C7126 OPEN
C7103 0.1
C7104 0.1
C7108 1
R7107 270
C7102 180p
R7108 1.8k
C7105 4.7/6.3
C7106 0.0012
C7107 0.01
R7109 OPEN
R7110 OPEN
R7121 47K
VR7101 22K
GAIN
R7111 OPEN
R7112 OPEN
CN7602
BLD [19]
HLTOR [7]
VIDLO [17]
RENON [16]
RENEN [15]
HCLKN [14]
HPLN [13]
VREF [12]
BW_VDD [10]
BW_VEE [9]
BW_COM [8]
HODL [6]
VPLN [5]
VCKN [4]
VIDHI [3]
PDR [2]
GND [1,11,19]
VFREG4.8 [20]
TO B/W VFIF CN7201
5
4
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2
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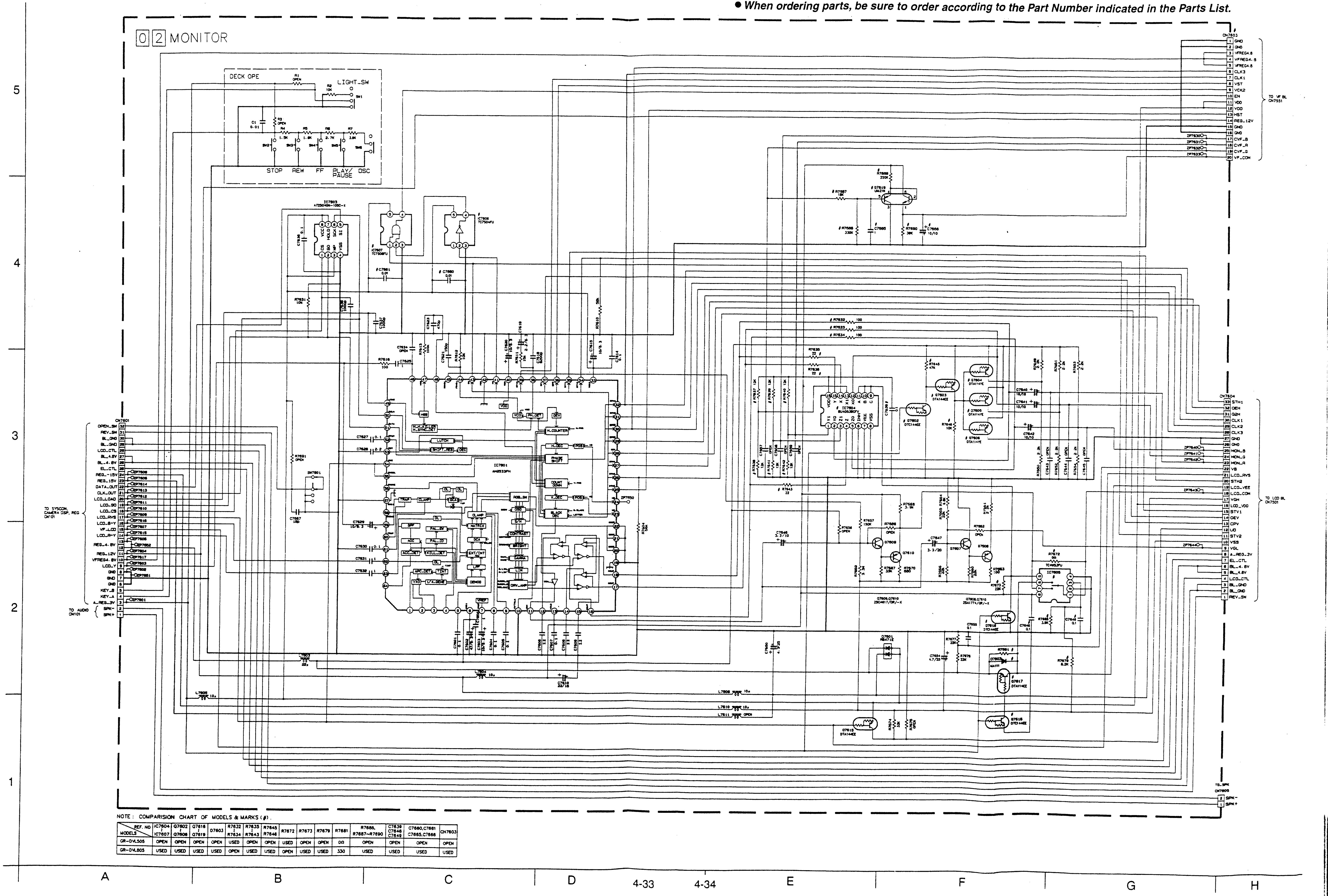
A
B
C
D
E
F
G
H

4.16 MONITOR SCHEMATIC DIAGRAM

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

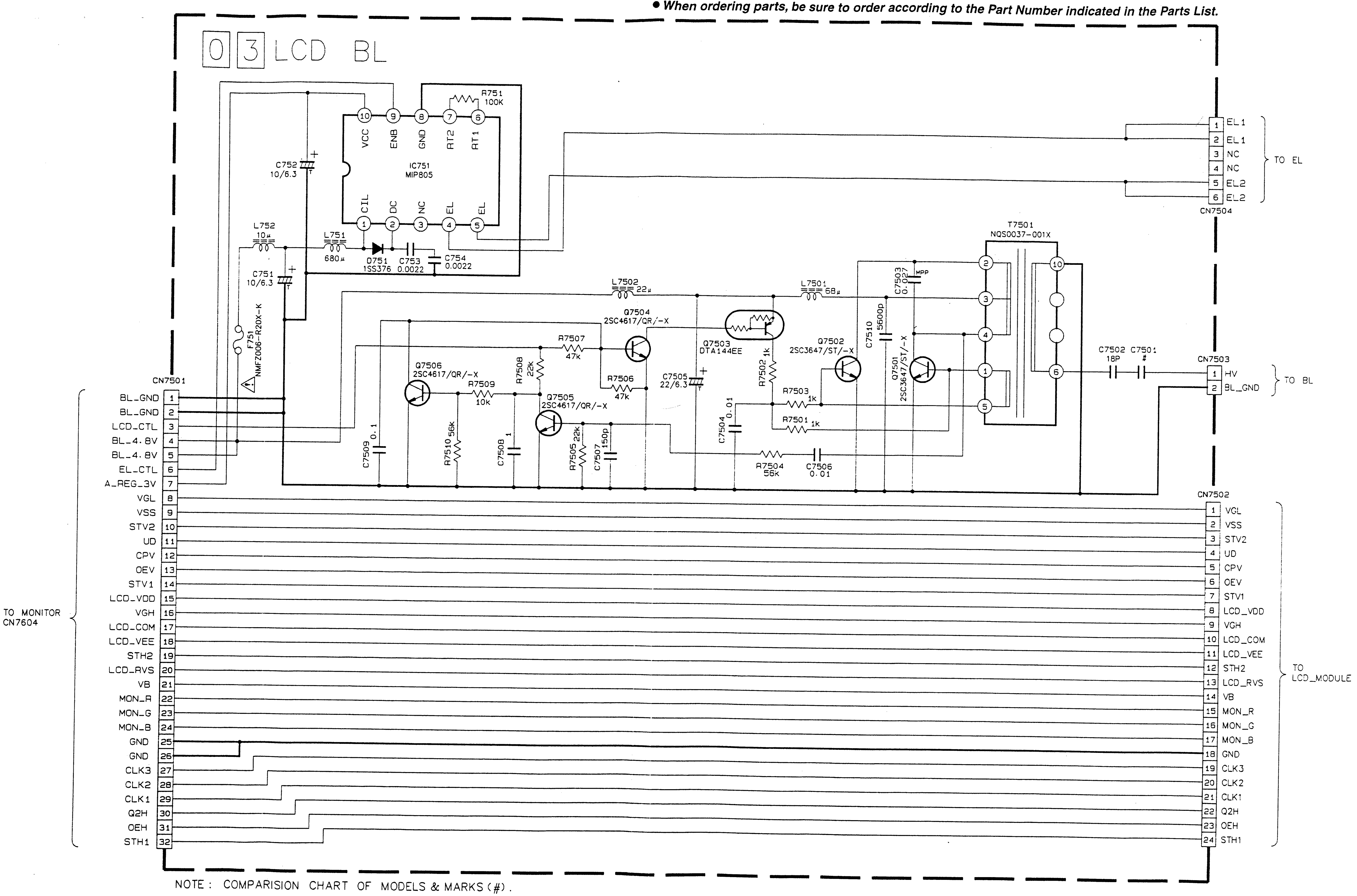

02 MONITOR
DECK OPE
LIGHT_SW
STOP
REW
FF
PLAY/PAUSE
OSC
IC7603
IC7601 AN2533FH
IC7604
IC7605
CN7601
OPEN_SW 32
REV_SW 31
BL_GND 30
BL_GND 29
LCD_CTL 28
BL_4.8V 27
BL_4.8V 26
EL_CTL 25
REG_-15V 24
REG_15V 23
DATA_OUT 22
CLK_OUT 21
LCD_LOAD 20
LCD_SO 19
LCD_CS 18
LCD_RVS 17
LCD_B-Y 16
VF_LCD 15
LCD_R-Y 14
REG_4.8V 13
12
REG_12V 11
VFREG4.8V 10
LCD_Y 9
GND 8
GND 7
GND 6
KEY_B 5
KEY_A 4
A_REG_3V 3
SPK- 2
SPK+ 1
TO SYSCON, CAMERA DSP, REG CN101
TO AUDIO CN101
CN7603
1 GND
2 GND
3 VFREG4.8
4 VFREG4.8
5 VFREG4.8
6 CLK3
7 CLK1
8 VST
9 VCK2
10 EN
11 VDD
12 VDD
13 HST
14 REG_12V
15 GND
16 GND
17 CVF_B
18 CVF_R
19 CVF_G
20 VF_COM
TO VF BL CN7551
CN7604
33 STH1
32 OEH
31 Q2H
30 CLK1
29 CLK2
28 CLK3
27 GND
26 GND
25 MON_B
24 MON_G
23 MON_R
22 VB
21 LCD_RVS
20 STH2
19 LCD_VEE
18 LCD_COM
17 VGH
16 LCD_VDD
15 STV1
14 OEV
13 CPV
12 UD
11 STV2
10 VSS
9 VGL
8 A_REG_3V
7 EL_CTL
6 BL_4.8V
5 BL_4.8V
4 LCD_CTL
3 BL_GND
2 BL_GND
1 REV_SW
TO LCD BL CN7501
TO SPK CN7605
2 SPK-
1 SPK+
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTE : COMPARISION CHART OF MODELS & MARKS (#).

REF. NO / MODELS	IC7604 ~ IC7607	Q7602 ~ Q7606	Q7616 ~ Q7619	D7603	R7632 ~ R7634	R7635 ~ R7643	R7645 R7646	R7672	R7673	R7679	R7681	R7686, R7687~R7690	C7639 C7646 C7649	C7660,C7661 C7665,C7666	CN7603
GR-DVL505	OPEN	OPEN	OPEN	OPEN	USED	OPEN	OPEN	USED	OPEN	OPEN	0Ω	OPEN	OPEN	OPEN	OPEN
GR-DVL805	USED	USED	USED	USED	OPEN	USED	USED	OPEN	USED	USED	330	USED	USED	USED	USED

4.17 LCD BL SCHEMATIC DIAGRAM

NOTES: ***● For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
● When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

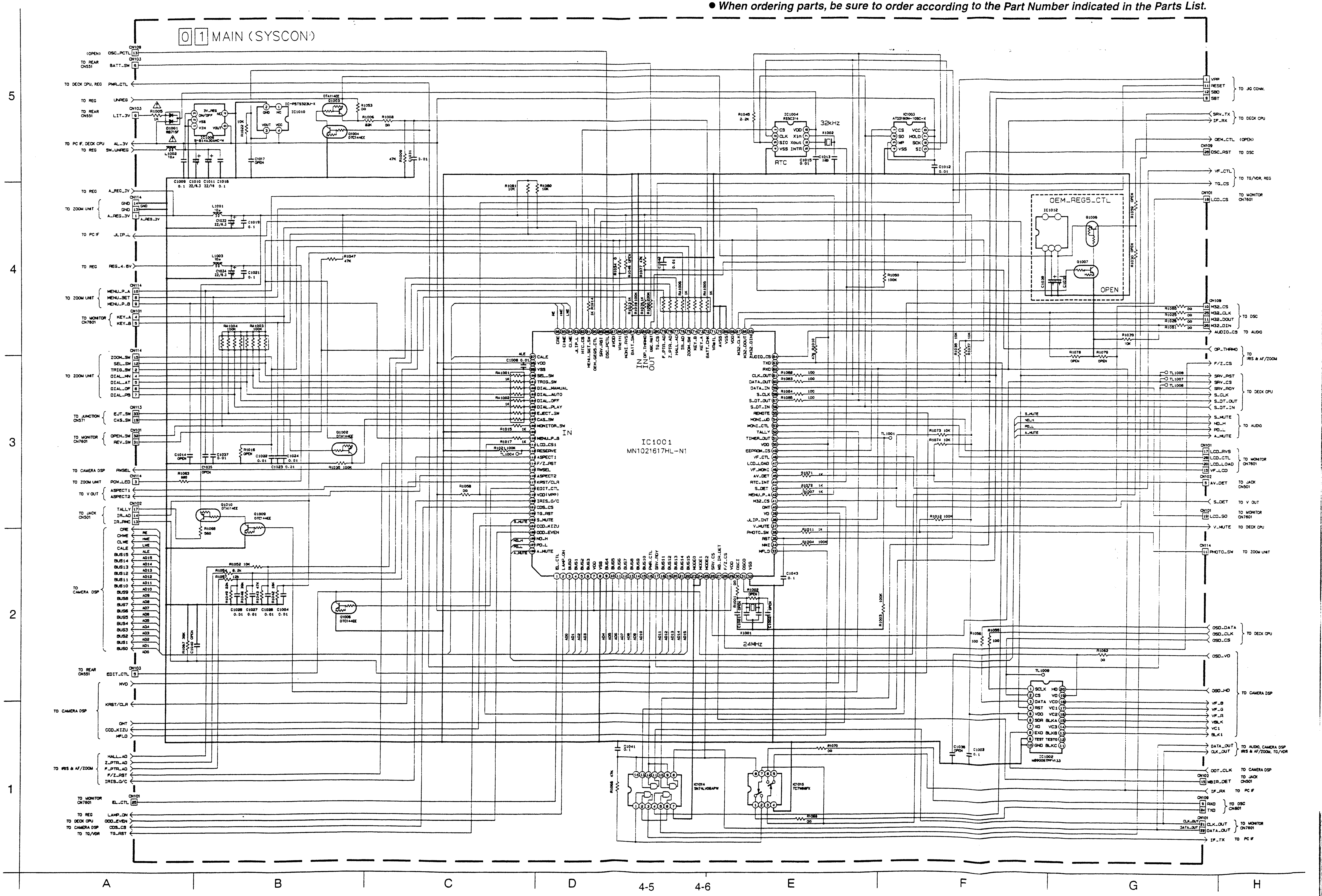

03 LCD BL
IC751 MIP805
VCC ENB GND RT2 RT1
CIL DC NC EL EL
R751 100K
C752 10/6.3
L752 10μ
L751 680μ
D751 1SS376
C753 0.0022
C754 0.0022
C751 10/6.3
F751 NMFZ006-R20X-K
L7502 22μ
L7501 68μ
Q7504 2SC4617/QR/-X
Q7503 DTA144EE
Q7502 2SC3647/ST/-X
Q7501 2SC3647/ST/-X
Q7506 2SC4617/QR/-X
Q7505 2SC4617/QR/-X
R7507 47k
R7506 47k
R7508 22k
R7509 10k
R7510 56k
R7505 22k
R7502 1k
R7503 1k
R7501 1k
R7504 56k
C7509 0.1
C7508 1
C7507 150p
C7505 22/6.3
C7504 0.01
C7506 0.01
C7510 5600p
C7503 0.027 MPP
T7501 NQS0037-001X
C7502 18P
C7501 #
CN7501
BL_GND 1
BL_GND 2
LCD_CTL 3
BL_4.8V 4
BL_4.8V 5
EL_CTL 6
A_REG_3V 7
VGL 8
VSS 9
STV2 10
UD 11
CPV 12
OEV 13
STV1 14
LCD_VDD 15
VGH 16
LCD_COM 17
LCD_VEE 18
STH2 19
LCD_RVS 20
VB 21
MON_R 22
MON_G 23
MON_B 24
GND 25
GND 26
CLK3 27
CLK2 28
CLK1 29
Q2H 30
OEH 31
STH1 32
TO MONITOR CN7604
CN7504
1 EL1
2 EL1
3 NC
4 NC
5 EL2
6 EL2
TO EL
CN7503
1 HV
2 BL_GND
TO BL
CN7502
1 VGL
2 VSS
3 STV2
4 UD
5 CPV
6 OEV
7 STV1
8 LCD_VDD
9 VGH
10 LCD_COM
11 LCD_VEE
12 STH2
13 LCD_RVS
14 VB
15 MON_R
16 MON_G
17 MON_B
18 GND
19 CLK3
20 CLK2
21 CLK1
22 Q2H
23 OEH
24 STH1
TO LCD_MODULE

NOTE : COMPARISION CHART OF MODELS & MARKS (#).

MODELS \ REF. NO	C7501
GR-DVL505	15P
GR-DVL805	18P

4.2 SYSCON SCHEMATIC DIAGRAM

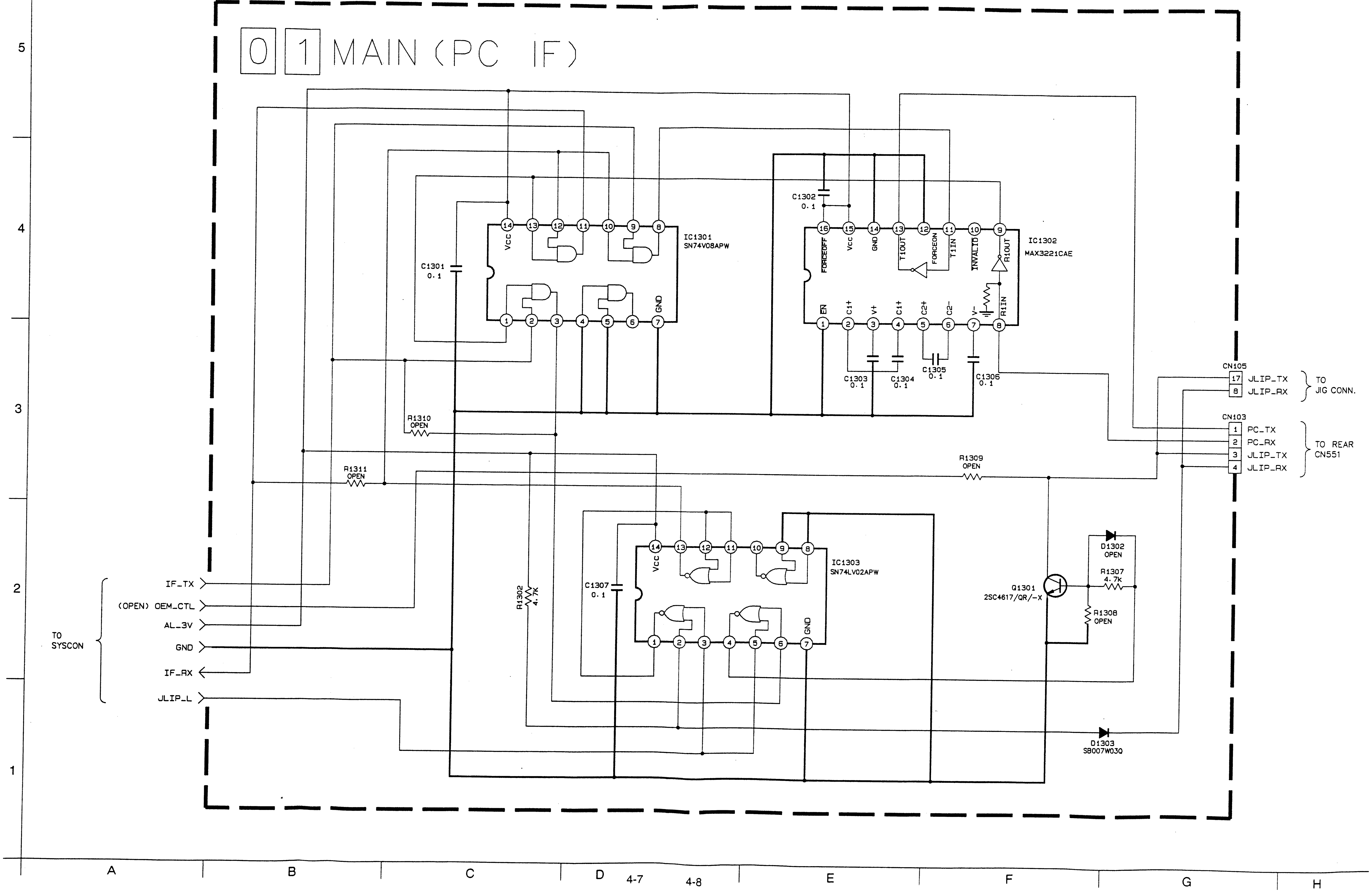
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



01 MAIN (SYSCON)
IC1001
MN1021617HL-N1
IN
OUT
IC1004
RS5C314
RTC
32kHz
X1002
IC1003
AT25160N-10SC-X
OEM_REG5_CTL
IC1012
Q1006
Q1007
OPEN
IC1010
IC-PST9323U-X
IC1006
S-81430AMC-W
Q1003
DTA114EE
Q1004
DTC144EE
Q1002
DTA144EE
Q1010
DTA114EE
Q1009
DTC144EE
Q1008
DTC144EE
X1001
24MHz
IC1002
MB90097PFV133
IC1014
SN74LV08APW
IC1015
TC7W66FK
TO REAR CN551
TO DECK CPU, REG
TO REG
TO PC IF, DECK CPU
TO ZOOM UNIT
TO PC IF
TO MONITOR CN7601
TO JUNCTION CN571
TO CAMERA DSP
TO V OUT
TO JACK CN501
TO IRIS & AF/ZOOM
TO DECK CPU
TO TG/VDR
TO JIG CONN.
TO DSC
TO TG/VDR, REG
TO AUDIO
TO IRIS & AF/ZOOM
TO AUDIO, CAMERA DSP
TO PC IF
OSC_PCTL
BATT_SW
PWR_CTL
UNREG
LIT_3V
AL_3V
SW_UNREG
A_REG_3V
JLIP_L
REG_4.8V
MENU_P_A
MENU_SET
MENU_P_B
KEY_A
KEY_B
ZOOM_SW
SEL_SW
TRIG_SW
DIAL_MN
DIAL_AT
DIAL_OF
DIAL_PB
EJT_SW
CAS_SW
OPEN_SW
REV_SW
PWSEL
POW_LED
ASPECT1
ASPECT2
TALLY
IR_AD
IR_PWC
CRE
CHWE
CLWE
CALE
BUS15
BUS14
BUS13
BUS12
BUS11
BUS10
BUS9
BUS8
BUS7
BUS6
BUS5
BUS4
BUS3
BUS2
BUS1
BUS0
EDIT_CTL
HVD
KRST/CLR
OMT
CCD_KIZU
MFLD
HALL_AD
Z_PTR_AD
F_PTR_AD
F/Z_RST
IRIS_O/C
EL_CTL
LAMP_ON
ODD_EVEN
CDS_CS
TG_RST
VPP
RESET
SBO
SBT
SRV_TX
IF_RX
OEM_CTL
OSC_RST
VF_CTL
TG_CS
LCD_CS
M32_CS
M32_CLK
M32_DOUT
M32_DIN
AUDIO_CS
OP_THRMO
F/Z_CS
SRV_RST
SRV_CS
SRV_RDY
S_CLK
S_DT_OUT
S_DT_IN
S_MUTE
NO_H
PO_L
A_MUTE
LCD_RVS
LCD_CTL
LCD_LOAD
VF_LCD
AV_DET
S_DET
LCD_SO
V_MUTE
PHOTO_SW
OSD_DATA
OSD_CLK
OSD_CS
OSD_VO
OSD_HO
VF_B
VF_G
VF_R
VBLK
VC1
BLK1
DATA_OUT
CLK_OUT
DOT_CLK
WBIR_DET
IF_RX
RXD
TXD
IF_TX
(OPEN)
CN109
CN103
CN114
CN101
CN113
CN102
SCLK
CS
DATA
RST
VDD
SDR
XD
EXD
TEST
GND
HD
VD
VCO
VC1
VC2
VC3
BLKA
BLKB
BLKC
TEST0
CALE
VDD
VSS
SEL_SW
TRIG_SW
DIAL_MANUAL
DIAL_AUTO
DIAL_OFF
DIAL_PLAY
EJECT_SW
CAS_SW
MONITOR_SW
MENU_P_B
LCD_CS1
RESERVE
ASPECT1
F/Z_RST
PWSEL
ASPECT2
KRST/CLR
EDIT_CTL
VDD(VPP)
IRIS_O/C
CDS_CS
TG_RST
S_MUTE
CCD_KIZU
ODD_EVEN
NO_H
PO_L
A_MUTE
AUDIO_CS
TXD
RXD
CLK_OUT
DATA_OUT
DATA_IN
S_CLK
S_DT_OUT
S_DT_IN
REMOTE
MONI_UD
MONI_CTL
TALLY
TIMER_OUT
VDD
EEPROM_CS
VF_CTL
LCD_LOAD
VF_MONI
AV_DET
RTC_INT
S_DET
MENU_P_A
M32_CS
OMT
VD
JLIP_INT
V_MUTE
PHOTO_SW
RST
NMI
MFLD
A
B
C
D
E
F
G
H
1
2
3
4
5

4.3 PC IF SCHEMATIC DIAGRAM

NOTES:
- ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
- ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***

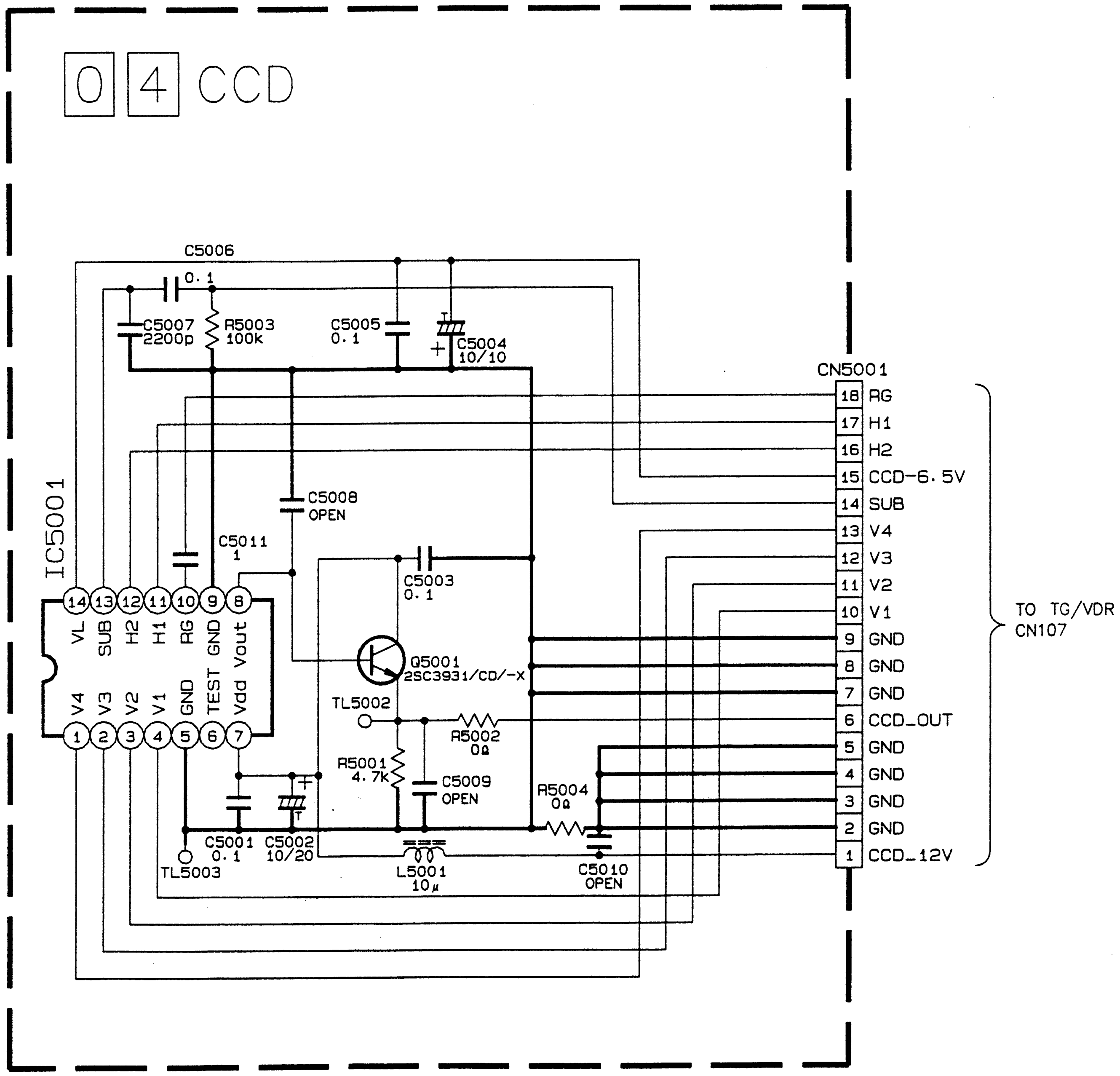


01 MAIN (PC IF)
IC1301
SN74V08APW
Vcc
GND
C1301
0.1
IC1302
MAX3221CAE
C1302
0.1
FORCEOFF
Vcc
GND
T1OUT
FORCEON
T1IN
INVALID
R1OUT
EN
C1+
V+
C1+
C2+
C2-
V-
R1IN
C1303
0.1
C1304
0.1
C1305
0.1
C1306
0.1
R1310
OPEN
R1311
OPEN
R1309
OPEN
R1302
4.7K
C1307
0.1
IC1303
SN74LV02APW
Vcc
GND
Q1301
2SC4617/QR/-X
D1302
OPEN
R1307
4.7K
R1308
OPEN
D1303
SB007W03Q
CN105
17 JLIP_TX
8 JLIP_RX
TO JIG CONN.
CN103
1 PC_TX
2 PC_RX
3 JLIP_TX
4 JLIP_RX
TO REAR CN551
IF_TX
(OPEN) OEM_CTL
AL_3V
GND
IF_RX
JLIP_L
TO SYSCON
5
4
3
2
1
A
B
C
D
E
F
G
H

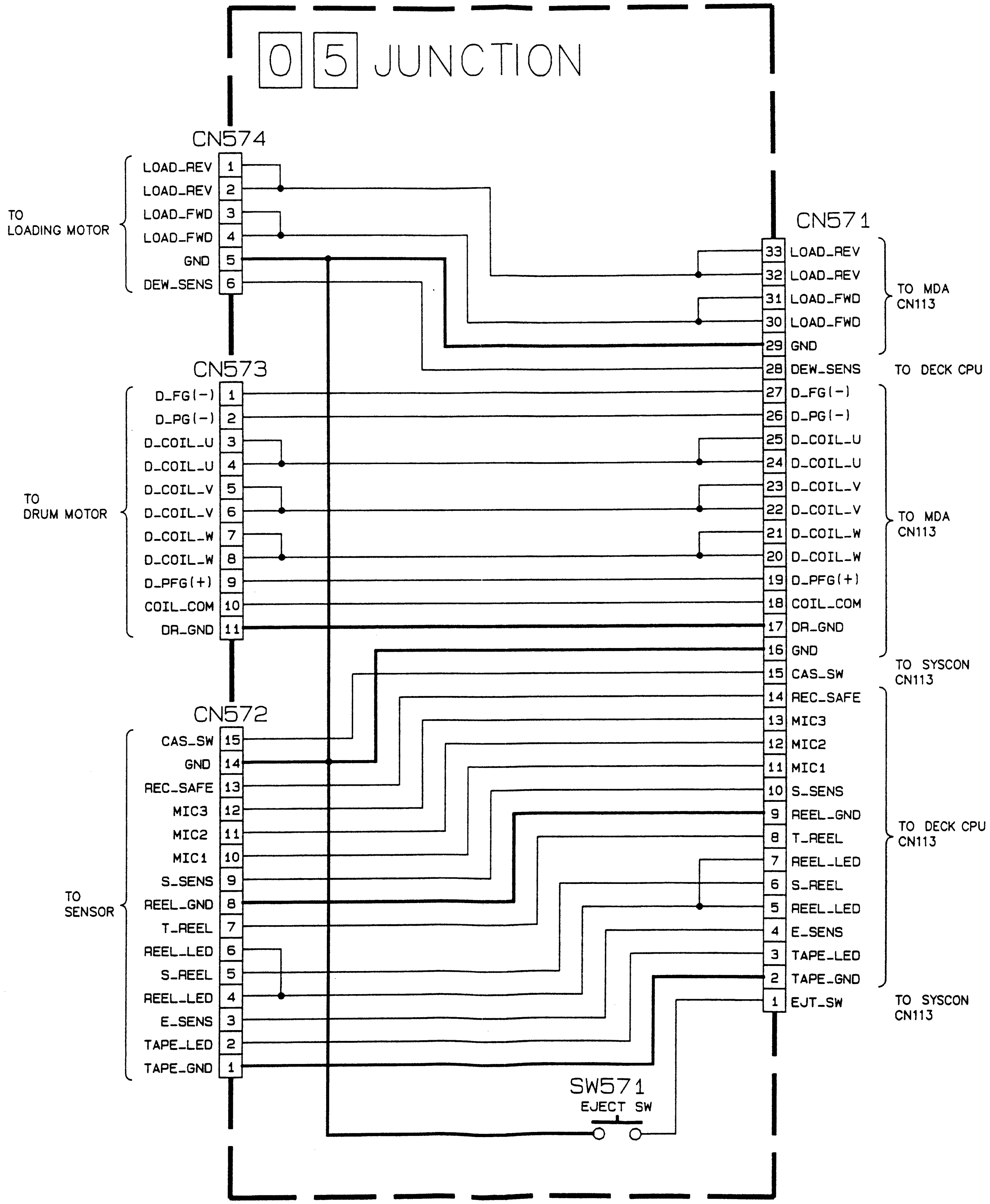
4.18 CCD AND JUNCTION SCHEMATIC DIAGRAMS

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

Note: IC5001 is incoporated in the CCD base assembly. When IC5001 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.



04 CCD
IC5001
14 VL
13 SUB
12 H2
11 H1
10 RG
9 GND
8 Vout
1 V4
2 V3
3 V2
4 V1
5 GND
6 TEST
7 Vdd
C5006 0.1
C5007 2200p
R5003 100k
C5005 0.1
C5004 10/10
C5008 OPEN
C5011 1
C5003 0.1
Q5001 2SC3931/CD/-X
TL5002
R5002 0Ω
R5001 4.7k
C5009 OPEN
R5004 0Ω
C5001 0.1
C5002 10/20
TL5003
L5001 10μ
C5010 OPEN
CN5001
18 RG
17 H1
16 H2
15 CCD-6.5V
14 SUB
13 V4
12 V3
11 V2
10 V1
9 GND
8 GND
7 GND
6 CCD_OUT
5 GND
4 GND
3 GND
2 GND
1 CCD_12V
TO TG/VDR CN107



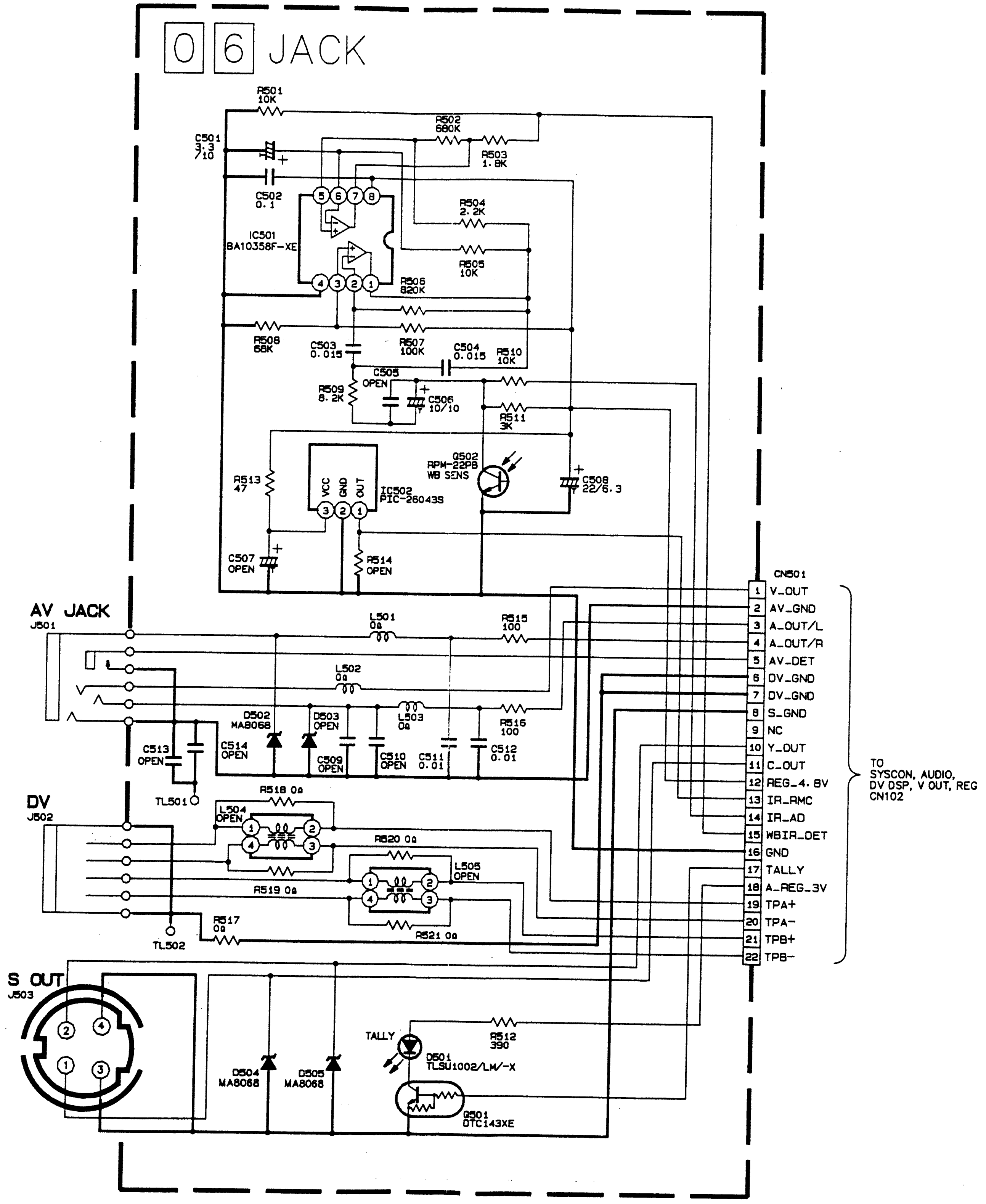
05 JUNCTION
CN574
TO LOADING MOTOR
LOAD_REV 1
LOAD_REV 2
LOAD_FWD 3
LOAD_FWD 4
GND 5
DEW_SENS 6
CN573
TO DRUM MOTOR
D_FG(-) 1
D_PG(-) 2
D_COIL_U 3
D_COIL_U 4
D_COIL_V 5
D_COIL_V 6
D_COIL_W 7
D_COIL_W 8
D_PFG(+) 9
COIL_COM 10
DR_GND 11
CN572
TO SENSOR
CAS_SW 15
GND 14
REC_SAFE 13
MIC3 12
MIC2 11
MIC1 10
S_SENS 9
REEL_GND 8
T_REEL 7
REEL_LED 6
S_REEL 5
REEL_LED 4
E_SENS 3
TAPE_LED 2
TAPE_GND 1
CN571
33 LOAD_REV
32 LOAD_REV
31 LOAD_FWD
30 LOAD_FWD
29 GND
TO MDA CN113
28 DEW_SENS
TO DECK CPU
27 D_FG(-)
26 D_PG(-)
25 D_COIL_U
24 D_COIL_U
23 D_COIL_V
22 D_COIL_V
21 D_COIL_W
20 D_COIL_W
19 D_PFG(+)
18 COIL_COM
17 DR_GND
16 GND
TO MDA CN113
15 CAS_SW
TO SYSCON CN113
14 REC_SAFE
13 MIC3
12 MIC2
11 MIC1
10 S_SENS
9 REEL_GND
8 T_REEL
7 REEL_LED
6 S_REEL
5 REEL_LED
4 E_SENS
3 TAPE_LED
2 TAPE_GND
TO DECK CPU CN113
1 EJT_SW
TO SYSCON CN113
SW571
EJECT SW

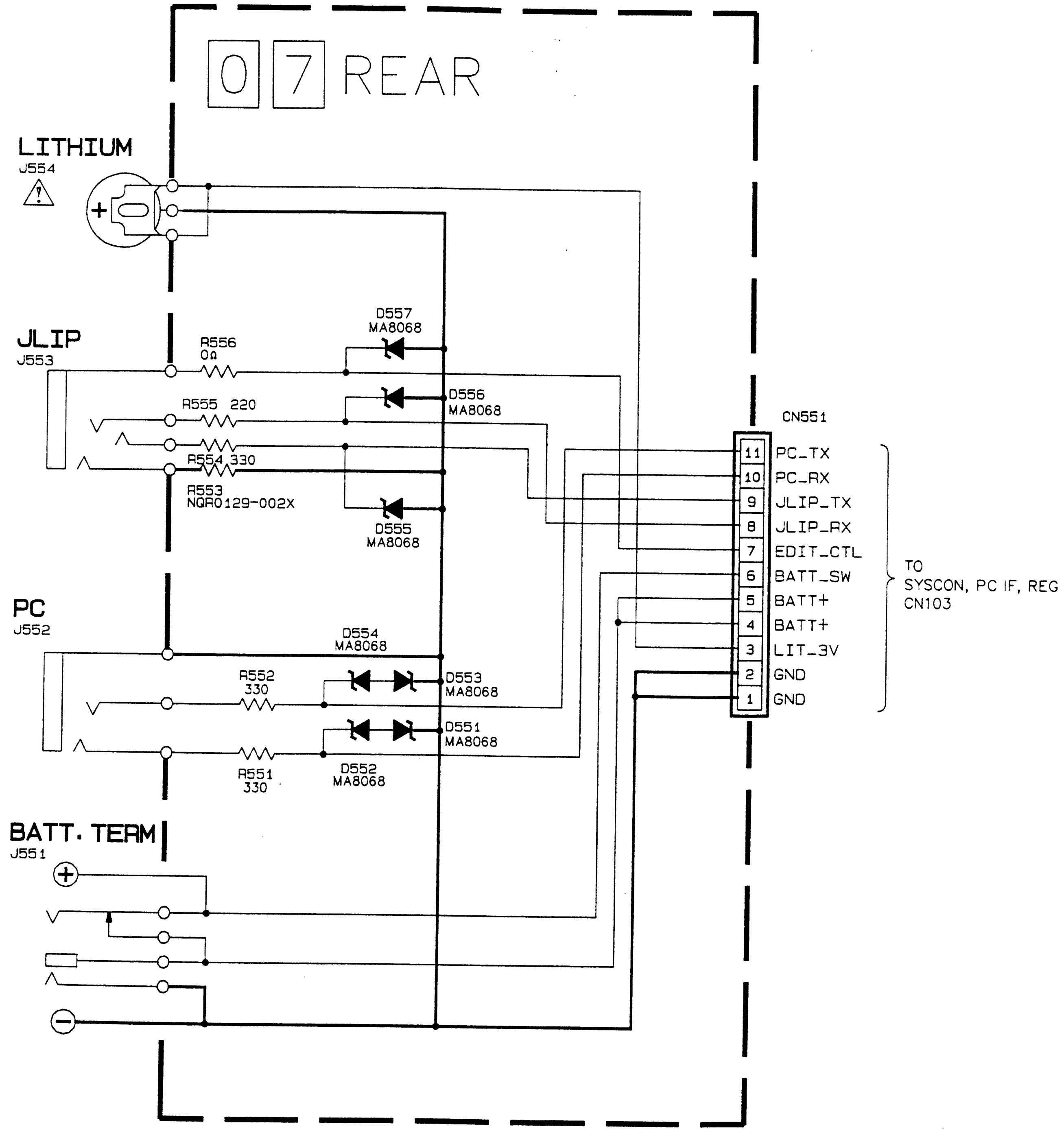
5
4
3
2
1

A B C D E F G H

4.19 JACK AND REAR SCHEMATIC DIAGRAMS

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

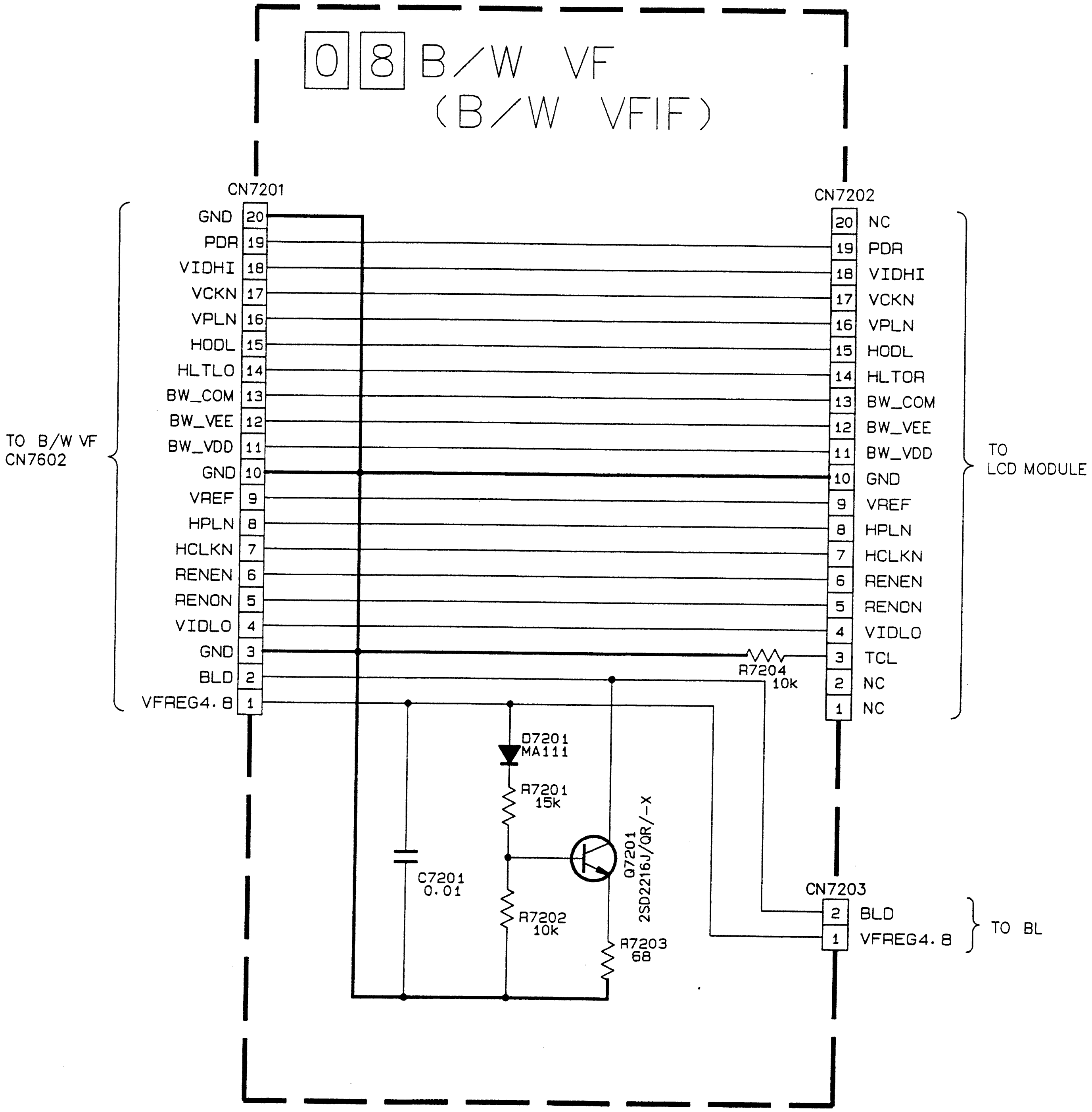

06 JACK
R501 10K
R502 680K
R503 1.8K
C501 3.3/10
C502 0.1
IC501 BA10358F-XE
R504 2.2K
R505 10K
R506 820K
R508 68K
C503 0.015
R507 100K
C504 0.015
R510 10K
C505 OPEN
R509 8.2K
C506 10/10
R511 3K
R513 47
VCC
GND
OUT
IC502 PIC-26043S
Q502 RPM-22PB WB SENS
C508 22/6.3
C507 OPEN
R514 OPEN
CN501
AV JACK
J501
L501 0Ω
R515 100
L502 0Ω
L503 0Ω
R516 100
D502 MA8068
D503 OPEN
C513 OPEN
C514 OPEN
C509 OPEN
C510 OPEN
C511 0.01
C512 0.01
TL501
DV
J502
R518 0Ω
L504 OPEN
R520 0Ω
L505 OPEN
R519 0Ω
R517 0Ω
R521 0Ω
TL502
S OUT
J503
D504 MA8068
D505 MA8068
TALLY
R512 390
D501 TLSU1002/LM/-X
Q501 DTC143XE
1 V_OUT
2 AV_GND
3 A_OUT/L
4 A_OUT/R
5 AV_DET
6 DV_GND
7 DV_GND
8 S_GND
9 NC
10 Y_OUT
11 C_OUT
12 REG_4.8V
13 IR_RMC
14 IR_AD
15 WBIR_DET
16 GND
17 TALLY
18 A_REG_3V
19 TPA+
20 TPA−
21 TPB+
22 TPB−
TO SYSCON, AUDIO, DV DSP, V OUT, REG CN102


07 REAR
LITHIUM
J554
JLIP
J553
R556 0Ω
D557 MA8068
R555 220
D556 MA8068
R554 330
R553 NQR0129-002X
D555 MA8068
PC
J552
D554 MA8068
R552 330
D553 MA8068
D551 MA8068
R551 330
D552 MA8068
BATT. TERM
J551
CN551
11 PC_TX
10 PC_RX
9 JLIP_TX
8 JLIP_RX
7 EDIT_CTL
6 BATT_SW
5 BATT+
4 BATT+
3 LIT_3V
2 GND
1 GND
TO SYSCON, PC IF, REG CN103

4.20 B/W VFIF AND ZOOM UNIT SCHEMATIC DIAGRAMS

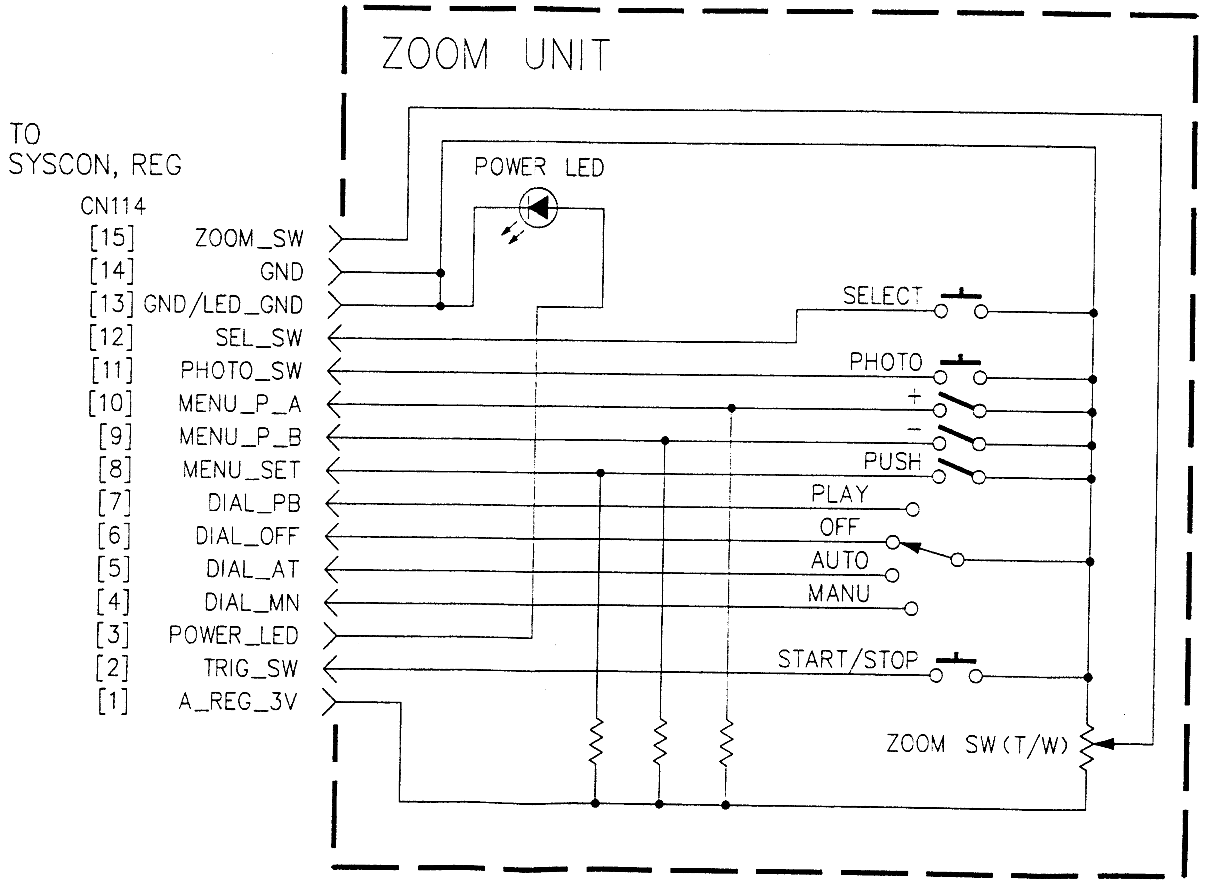
<ONLY FOR DVL505>

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*



08 B/W VF
(B/W VFIF)
CN7201
TO B/W VF CN7602
GND 20
PDR 19
VIDHI 18
VCKN 17
VPLN 16
HODL 15
HLTLO 14
BW_COM 13
BW_VEE 12
BW_VDD 11
GND 10
VREF 9
HPLN 8
HCLKN 7
RENEN 6
RENON 5
VIDLO 4
GND 3
BLD 2
VFREG4.8 1
CN7202
20 NC
19 PDR
18 VIDHI
17 VCKN
16 VPLN
15 HODL
14 HLTOR
13 BW_COM
12 BW_VEE
11 BW_VDD
10 GND
9 VREF
8 HPLN
7 HCLKN
6 RENEN
5 RENON
4 VIDLO
3 TCL
2 NC
1 NC
TO LCD MODULE
R7204 10k
D7201 MA111
R7201 15k
C7201 0.01
Q7201 2SD2216J/QR/-X
R7202 10k
R7203 68
CN7203
2 BLD
1 VFREG4.8
TO BL

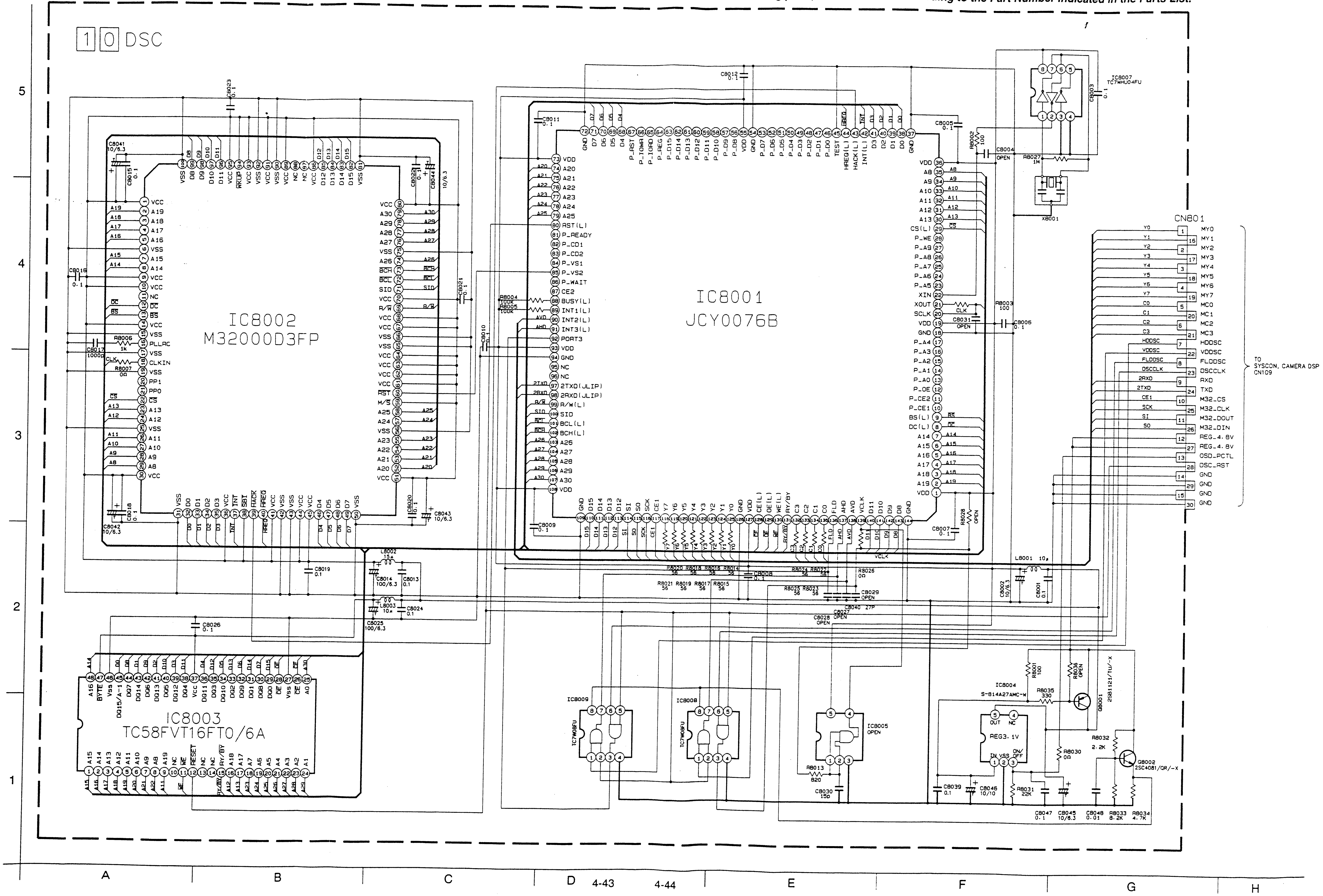
NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*
● *The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.*



ZOOM UNIT
TO SYSCON, REG
CN114
[15] ZOOM_SW
[14] GND
[13] GND/LED_GND
[12] SEL_SW
[11] PHOTO_SW
[10] MENU_P_A
[9] MENU_P_B
[8] MENU_SET
[7] DIAL_PB
[6] DIAL_OFF
[5] DIAL_AT
[4] DIAL_MN
[3] POWER_LED
[2] TRIG_SW
[1] A_REG_3V
POWER LED
SELECT
PHOTO
+
−
PUSH
PLAY
OFF
AUTO
MANU
START/STOP
ZOOM SW(T/W)

4.21 DSC SCHEMATIC DIAGRAM

NOTES:
- ***For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".***
- ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



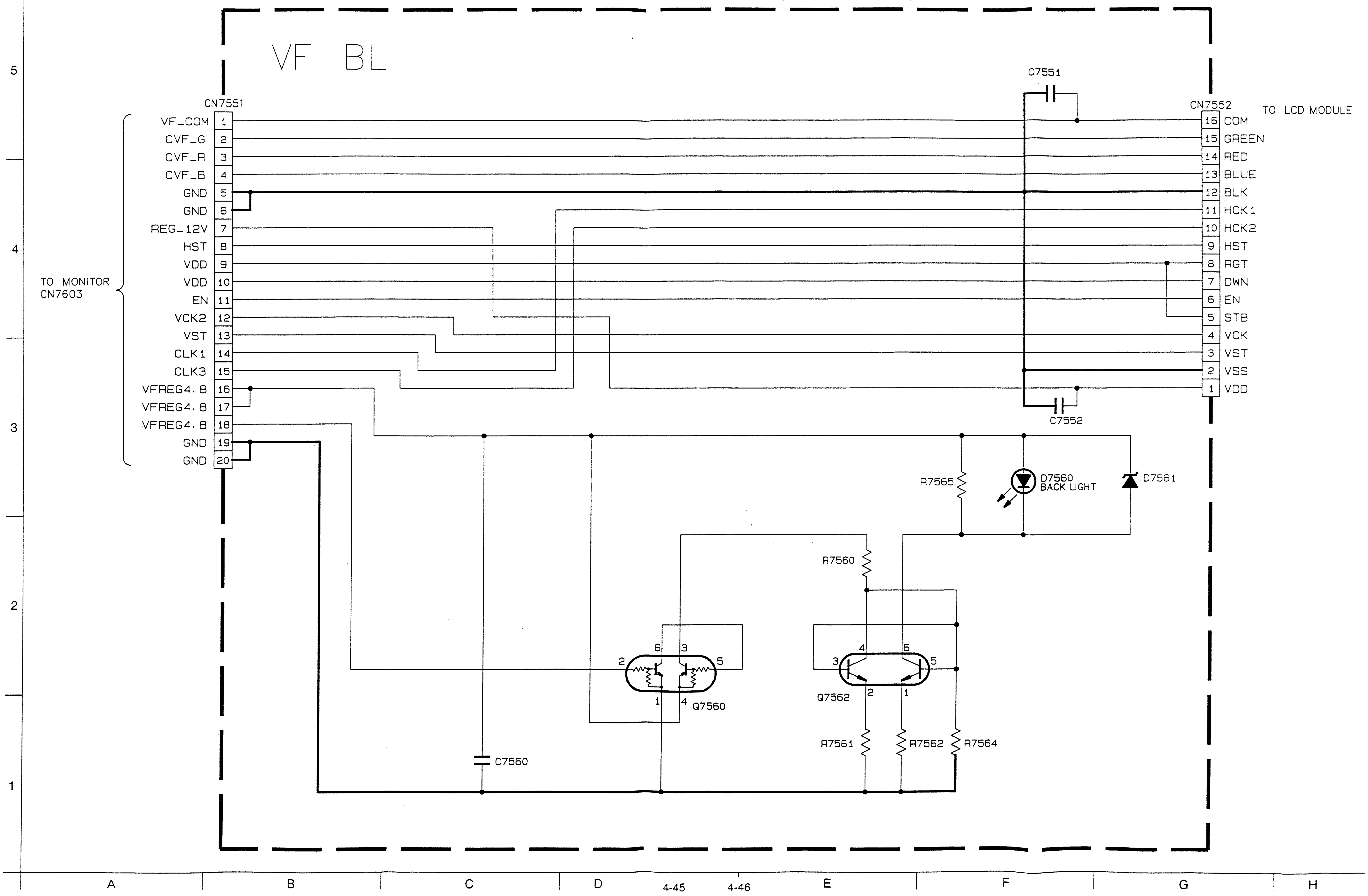
10 DSC
IC8001
JCY0076B
IC8002
M32000D3FP
IC8003
TC58FVT16FT0/6A
IC8004
S-814A27AMC-W
REG3.1V
IC8005
OPEN
IC8007
TC7WHU04FU
IC8008
TC7W08FU
IC8009
TC7W08FU
X8001
Q8001
2SB1121/TU/-X
Q8002
2SC4081/QR/-X
CN801
1 MY0
16 MY1
2 MY2
17 MY3
3 MY4
18 MY5
4 MY6
19 MY7
5 MC0
20 MC1
6 MC2
21 MC3
7 HDDSC
22 VDDSC
8 FLDDSC
23 OSCCLK
9 RXD
24 TXD
10 M32_CS
25 M32_CLK
11 M32_DOUT
26 M32_DIN
12 REG_4.8V
27 REG_4.8V
13 OSD_PCTL
28 OSC_RST
14 GND
29 GND
15 GND
30 GND
TO SYSCON, CAMERA DSP CN109
L8001 10μ
L8002 15μ
L8003 10μ
C8001 0.1
C8002 10/6.3
C8003 0.1
C8004 OPEN
C8005 0.1
C8006 0.1
C8007 0.1
C8008 0.1
C8009 0.1
C8010 0.1
C8011 0.1
C8012 0.1
C8013 0.1
C8014 100/6.3
C8015 0.1
C8016 0.1
C8017 1000p
C8018 0.1
C8019 0.1
C8020 0.1
C8021 0.1
C8022 0.1
C8023 0.1
C8024 0.1
C8025 100/6.3
C8026 0.1
C8027 OPEN
C8028 OPEN
C8029 OPEN
C8030 15p
C8031 OPEN
C8039 0.1
C8040 27P
C8041 10/6.3
C8042 10/6.3
C8043 10/6.3
C8044 10/6.3
C8045 10/6.3
C8046 10/10
C8047 0.1
C8048 0.01
R8001 100
R8002 100
R8003 100
R8004 100K
R8005 100K
R8006 1K
R8007 0Ω
R8013 820
R8014 56
R8015 56
R8016 56
R8017 56
R8018 56
R8019 56
R8020 56
R8021 56
R8022 56
R8023 56
R8024 56
R8025 56
R8026 0Ω
R8027 1M
R8028 OPEN
R8030 0Ω
R8031 22K
R8032 2.2K
R8033 8.2K
R8034 4.7K
R8035 330
R8036 OPEN
A
B
C
D
E
F
G
H
1
2
3
4
5

4.22 VF BL SCHEMATIC DIAGRAM

<ONLY FOR DVL 805>

NOTES: ● *For the destination of each signal and further line connections that are cut off from this diagram, refer to "4.1 BOARD INTERCONNECTIONS".*

● *The schematic diagram is only for reference. Avoid replacing individual parts. Replace the entire unit only.*

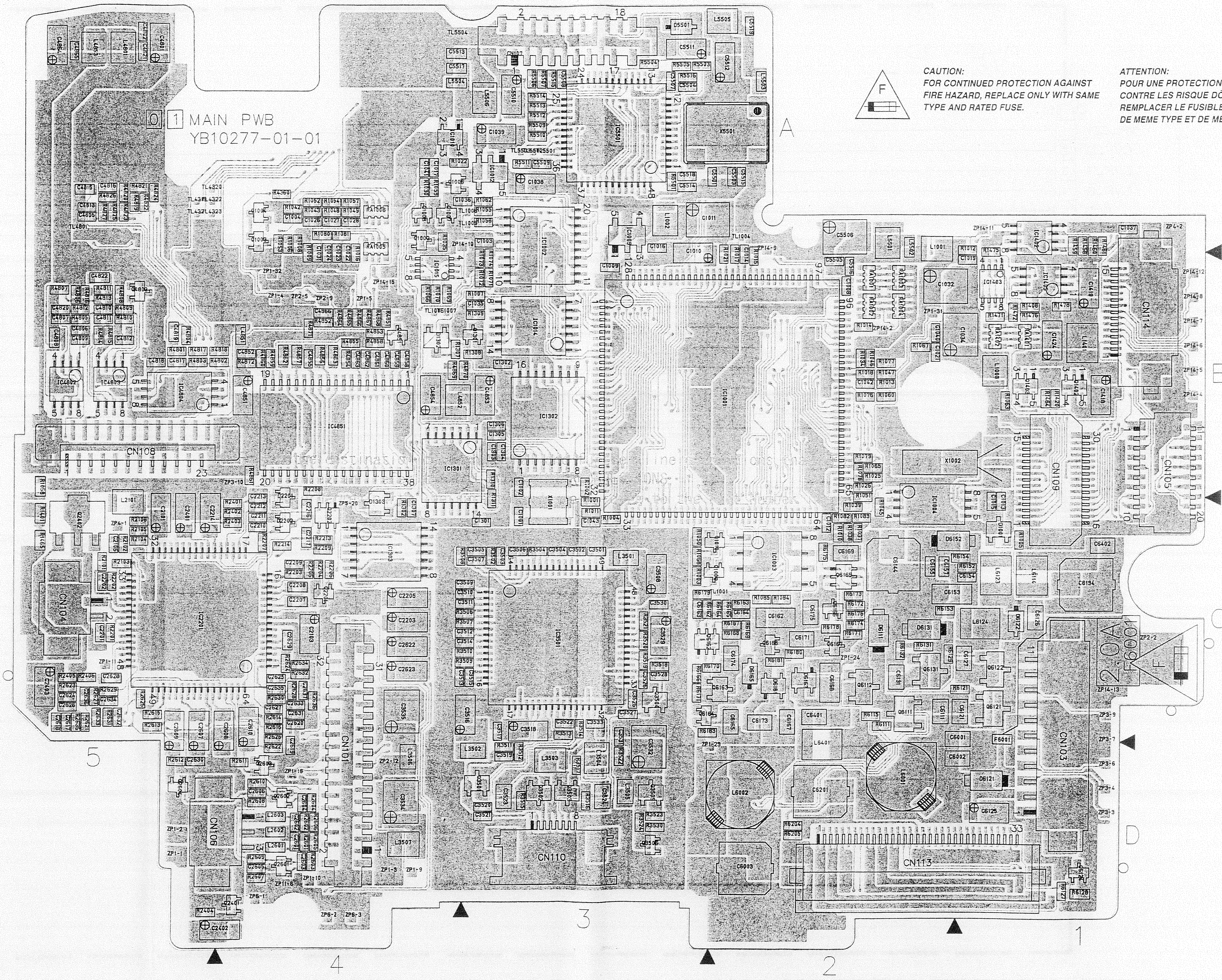

VF BL
CN7551
TO MONITOR CN7603
1 VF_COM
2 CVF_G
3 CVF_R
4 CVF_B
5 GND
6 GND
7 REG_12V
8 HST
9 VDD
10 VDD
11 EN
12 VCK2
13 VST
14 CLK1
15 CLK3
16 VFREG4.8
17 VFREG4.8
18 VFREG4.8
19 GND
20 GND
C7551
CN7552
TO LCD MODULE
16 COM
15 GREEN
14 RED
13 BLUE
12 BLK
11 HCK1
10 HCK2
9 HST
8 RGT
7 DWN
6 EN
5 STB
4 VCK
3 VST
2 VSS
1 VDD
C7552
R7565
D7560 BACK LIGHT
D7561
R7560
Q7560
Q7562
R7561
R7562
R7564
C7560
1
2
3
4
5
6
5
4
3
2
1
A
B
C
D
E
F
G
H

4.23 MAIN CIRCUIT BOARD

FOIL SIDE (B)

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÔINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.


0 1 MAIN PWB
YB10277-01-01
A
B
C
D
1
2
3
4
5
CN108
CN104
CN106
CN101
CN110
CN113
CN103
CN105
CN109
CN114
IC4851
IC2201
IC3501
IC1001
IC1301
IC1302
X5501
X1002
F6001
2.0A

COMPONENT PARTS LOCATION GUIDE (MAIN)

CAPACITOR

REF.No.	LOCATION		
C1001	B	C	3C
C1002	B	C	3B
C1003	B	C	3A
C1004	B	C	4A
C1008	B	C	2B
C1009	B	C	3B
C1010	B	C	3B
C1011	B	C	3A
C1012	B	C	2C
C1013	B	C	1C
C1014	B	C	2B
C1015	B	C	1C
C1016	B	C	3A
C1017	B	C	4A
C1019	B	C	1B
C1021	B	C	2B
C1022	B	C	4B
C1023	B	C	4B
C1024	B	C	4B
C1026	B	C	4A
C1027	B	C	4A
C1028	B	C	4A
C1031	B	C	4B
C1032	B	C	2B
C1034	B	C	1B
C1035	B	C	3B
C1036	B	C	4A
C1037	B	C	1A
C1038	B	C	3A
C1039	B	C	3A
C1040	B	C	2B
C1041	B	C	4A
C1042	B	C	2B
C1043	B	C	3C
C1301	B	C	3C
C1302	B	C	3B
C1303	B	C	3B
C1304	B	C	3B
C1305	B	C	3B
C1306	B	C	3B
C1307	B	C	4C
C1401	A	C	2B
C1402	A	C	2B
C1411	A	C	2B
C1412	A	C	2B
C1413	A	C	2B
C1414	A	C	2B
C1415	A	C	2B
C1416	A	C	2B
C1417	A	C	2B
C1418	B	C	1B
C1419	B	C	1B
C1420	A	C	3A
C1421	A	C	3A
C1422	A	C	3B
C1423	A	C	3B
C1424	B	C	1B
C1425	A	C	3B
C1601	A	C	1B
C1602	A	C	1B
C1603	A	C	1B
C1605	A	C	1A
C1606	A	C	1B
C1607	A	C	1B
C1610	A	C	1A
C1611	A	C	1A
C1612	A	C	1A
C1613	A	C	1A
C1614	A	C	1C
C1615	A	C	1B
C1616	A	C	1B
C1617	A	C	1B
C1618	A	C	1B
C1619	A	C	1B
C1620	A	C	1B
C1621	A	C	1B
C1622	A	C	1B
C1623	A	C	1B
C1624	A	C	1B
C1625	A	C	1B
C1626	A	C	1B
C1627	A	C	1A
C1628	A	C	1B
C1632	A	C	1B
C1633	A	C	2B
C1635	A	C	2B
C1638	A	C	1A
C1639	A	C	1A
C1640	A	C	1B
C1641	A	C	1B
C1642	A	C	1A
C2101	B	C	5C
C2103	B	C	4C
C2105	B	C	5C
C2201	B	C	5C
C2202	B	C	5C
C2203	B	C	4C
C2205	B	C	4C
C2207	B	C	4C
C2208	B	C	4C
C2209	B	C	4C
C2210	B	C	4C
C2211	B	C	4C
C2212	B	C	4C
C2213	B	C	4C
C2214	B	C	5C
C2216	B	C	4C
C2217	B	C	4C
C2401	B	C	5C
C2402	B	C	4D
C2403	B	C	5C
C2601	B	C	4D
C2602	B	C	4D
C2603	B	C	4D
C2604	B	C	4D
C2605	B	C	4D
C2606	B	C	4D
C2607	B	C	5C
C2608	B	C	4C
C2609	B	C	5C
C2610	B	C	4C
C2617	B	C	5C
C2618	B	C	5C
C2619	B	C	4D
C2620	B	C	4C
C2622	B	C	4C
C2623	B	C	4C
C2624	B	C	5C
C2625	B	C	4C
C2626	B	C	5C
C2627	B	C	4C
C2628	B	C	5C
C2629	B	C	4C
C2630	B	C	5D
C2631	B	C	4C
C2632	B	C	5C
C2633	B	C	4C
C2634	B	C	5C
C2635	B	C	4C
C2636	B	C	5C
C2637	B	C	4C
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C3002	A	C	3B
C3003	A	C	3B
C3004	A	C	3B
C3005	A	C	3B
C3006	A	C	3C
C3007	A	C	4C
C3009	A	C	4B
C3010	A	C	4B
C3011	A	C	4B
C3012	A	C	4B
C3022	A	C	3B
C3023	A	C	4B
C3027	A	C	4C
C3028	A	C	4C
C3035	A	C	4B
C3037	A	C	4B
C3038	A	C	4C
C3040	A	C	4B
C3041	A	C	4B
C3042	A	C	4B
C3047	A	C	4C
C3048	A	C	4C
C3049	A	C	4B
C3050	A	C	4B
C3101	A	C	5C
C3102	A	C	5C
C3103	A	C	5C
C3104	A	C	5C
C3105	A	C	5C
C3106	A	C	5C
C3107	A	C	5C
C3108	A	C	4C
C3109	A	C	5C
C3203	A	C	3C
C3204	A	C	3C
C3205	A	C	3C
C3207	A	C	3C
C3208	A	C	3C
C3211	A	C	3C
C3212	A	C	3C
C3213	A	C	3C
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C3215	A	C	2B
C3217	A	C	3C
C3218	A	C	3C
C3219	A	C	2B
C3220	A	C	3B
C3221	A	C	4D
C3222	A	C	2B
C3223	A	C	2C
C3224	A	C	2C
C3227	A	C	3D
C3228	A	C	3D
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C3306	A	C	3D
C3307	A	C	4C
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C3309	A	C	3D
C3310	A	C	3D
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C3312	A	C	4D
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C3318	A	C	4D
C3319	A	C	4D
C3320	A	C	4D
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C3322	A	C	3D
C3323	A	C	3D
C3324	A	C	3C
C3326	A	C	3D
C3327	A	C	3D
C3328	A	C	4D
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C3336	A	C	3D
C3337	A	C	3D
C3501	B	C	3C
C3502	B	C	3C
C3503	B	C	3C
C3504	B	C	3C
C3505	B	C	3C
C3506	B	C	3C
C3507	B	C	3C
C3508	B	C	3C
C3509	B	C	3C
C3510	B	C	3C
C3511	B	C	3C
C3512	B	C	3C
C3513	B	C	4C
C3514	B	C	3C
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C3520	B	C	3D
C3521	B	C	3D
C3522	B	C	3C
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C3529	B	C	3C
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C3532	B	C	3D
C3533	B	C	3C
C3534	B	C	4D
C3535	B	C	4C
C3701	A	C	5A
C3702	A	C	5A
C3703	A	C	5B
C3704	A	C	5B
C3705	A	C	5A
C3706	A	C	5B
C3707	A	C	5B
C3708	A	C	5A
C3709	A	C	5B
C3710	A	C	5B
C3711	A	C	5B
C3712	A	C	5B
C3713	A	C	5B
C3714	A	C	5B
C4201	A	C	5A
C4202	A	C	5A
C4203	A	C	5A
C4204	A	C	5A
C4205	A	C	5A
C4206	A	C	5A
C4207	A	C	5A
C4208	A	C	5A
C4209	A	C	4A
C4210	A	C	5A
C4211	A	C	5A
C4212	A	C	5A
C4213	A	C	5A
C4214	A	C	5A
C4215	A	C	4A
C4216	A	C	5A
C4217	A	C	4A
C4301	A	C	3B
C4302	A	C	3A
C4303	A	C	4B
C4304	A	C	3B
C4305	A	C	3B
C4306	A	C	3B
C4307	A	C	3B
C4308	A	C	4A
C4309	A	C	4A
C4310	A	C	5A
C4311	A	C	5B
C4312	A	C	4B
C4313	A	C	4A
C4314	A	C	4B
C4315	A	C	4A
C4316	A	C	4A
C4317	A	C	4A
C4318	A	C	4B
C4319	A	C	3A
C4320	A	C	4B
C4321	A	C	3A
C4322	A	C	4A
C4323	A	C	3A
C4324	A	C	4A
C4325	A	C	4B
C4326	A	C	4A
C4327	A	C	3B
C4328	A	C	3B
C4329	A	C	3B
C4330	A	C	2A
C4331	A	C	3A
C4332	A	C	3A
C4333	A	C	2A
C4334	A	C	4B
C4335	A	C	3A
C4336	A	C	3A
C4337	A	C	4A
C4338	A	C	3A
C4339	A	C	3A
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C4341	A	C	3A
C4342	A	C	3A
C4343	A	C	3A
C4344	A	C	3A
C4345	A	C	3A
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C4804	A	C	5A
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C4858	B	C	4B
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C6003	B	C	2D
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C6010	A	C	2D
C6011	A	C	2D
C6012	A	C	2D
C6013	A	C	2D
C6014	A	C	2D
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C6016	A	C	2D
C6017	A	C	3D
C6018	A	C	3D
C6019	A	C	3D
C6022	A	C	2D
C6111	B	C	2C
C6113	A	C	2C
C6114	A	C	2C
C6121	B	C	1C
C6123	A	C	1C
C6124	A	C	1C
C6125	B	C	1D
C6126	B	C	1C
C6127	B	C	1C
C6131	B	C	2C
C6132	A	C	1C
C6133	A	C	2D
C6134	B	C	1C
C6141	A	C	1C
C6142	A	C	1C
C6143	A	C	1C
C6144	B	C	2C
C6151	A	C	2C
C6153	B	C	2C
C6154	B	C	1C
C6155	B	C	2C
C6157	B	C	2C
C6161	A	C	2D
C6162	B	C	2C
C6163	B	C	3C
C6164	B	C	2C
C6165	B	C	2C
C6167	B	C	2C
C6168	B	C	2C
C6169	B	C	2C
C6171	B	C	2C
C6173	B	C	2C
C6174	B	C	2C
C6175	B	C	2C
C6201	B	C	2D
C6301	A	C	3D
C6302	A	C	3C
C6401	B	C	2C
C6402	B	C	1C

CONNECTOR

REF.No.	LOCATION		
CN101	B	C	4D
CN102	A	C	4D
CN103	B	C	1D
CN104	B	C	5C
CN105	B	C	1B
CN106	B	C	4D
CN107	B	C	3A
CN108	B	C	5B
CN109	B	C	1C
CN110	B	C	3D
CN111	A	C	5B
CN112	A	C	1D
CN113	B	C	2D
CN114	B	C	1B

DIODE

REF.No.	LOCATION		
D1001	B	C	1C
D1302	B	C	4B
D1303	B	C	4C
D1602	A	C	1C
D1603	A	C	2B
D1604	A	C	1B
D2201	B	C	4C
D2202	B	C	4C
D5501	B	C	3A
D6111	B	C	2C
D6121	B	C	1D
D6122	B	C	1C
D6131	B	C	2C
D6141	A	C	1C
D6151	A	C	2B
D6152	B	C	2C
D6161	B	C	2C
D6163	B	C	2C
D6165	B	C	2C

IC

REF.No.	LOCATION		
IC1001	B	C	2B
IC1002	B	C	3A
IC1003	B	C	2C
IC1004	B	C	2C
IC1009	B	C	3A
IC1010	B	C	4A
IC1012	B	C	3A
IC1014	B	C	3B
IC1015	B	C	4B
IC1301	B	C	4B
IC1302	B	C	3B
IC1303	B	C	4C
IC1401	A	C	2B
IC1402	B	C	1A
IC1403	B	C	1B
IC1405	B	C	1B
IC1601	A	C	1B
IC2201	B	C	5C
IC3001	A	C	4B
IC3002	A	C	4C
IC3004	A	C	3B
IC3005	A	C	4B
IC3007	A	C	3C
IC3101	A	C	5C
IC3201	A	C	2C
IC3202	A	C	4D
IC3203	A	C	3D
IC3301	A	C	4D
IC3501	B	C	3C
IC3701	A	C	5B
IC4201	A	C	4A
IC4202	A	C	5A
IC4301	A	C	3A
IC4302	A	C	3A
IC4303	A	C	3B
IC4802	B	C	5B
IC4803	B	C	5B
IC4804	B	C	5B
IC4805	A	C	5A
IC4851	B	C	4B
IC5501	B	C	3A
IC6001	A	C	2D
IC6301	A	C	3D

COIL

REF.No.	LOCATION		
L1001	B	C	2A
L1002	B	C	3A
L1003	B	C	1B
L1401	B	C	1B
L1601	A	C	1B
L1602	A	C	1C
L2101	B	C	5C
L2601	B	C	4D
L2602	B	C	4D
L2603	B	C	4D
L3001	A	C	4C
L3002	A	C	3B
L3004	A	C	4C
L3005	A	C	3C
L3101	A	C	5C
L3102	A	C	5C
L3103	A	C	5C
L3104	A	C	5C
L3202	A	C	3C
L3203	A	C	3D
L3204	A	C	3B
L3301	A	C	3D
L3302	A	C	4D
L3303	A	C	3D
L3304	A	C	4D
L3501	B	C	3C
L3502	B	C	3D
L3503	B	C	3D
L3504	B	C	3D
L3505	B	C	3D
L3506	B	C	4D
L3507	B	C	4D
L3701	A	C	5A
L3702	A	C	5B
L4201	A	C	5A
L4301	A	C	3B
L4302	A	C	3B
L4303	A	C	5A
L4304	A	C	5B
L4305	A	C	2A
L4306	A	C	3B
L4307	A	C	3A
L4801	B	C	5A
L4802	A	C	5A
L4851	B	C	4B
L4852	B	C	4B
L4853	B	C	5A
L5501	B	C	2A
L5502	B	C	2A
L5503	B	C	2A
L5504	B	C	4A
L5505	B	C	2A
L5506	B	C	3A
L6001	B	C	2D
L6002	B	C	2D
L6111	A	C	1C
L6114	B	C	1C
L6121	A	C	1D
L6123	B	C	1C
L6124	B	C	1C
L6131	A	C	1C
L6141	A	C	1C
L6151	A	C	2C
L6161	A	C	2C
L6202	A	C	1D
L6401	B	C	2D

TRANSISTOR

REF.No.	LOCATION		
Q1002	B	C	4A
Q1003	B	C	4A
Q1004	B	C	4A
Q1006	B	C	4A
Q1007	B	C	4A
Q1008	B	C	4A
Q1009	B	C	2C
Q1010	B	C	2C
Q1301	B	C	3B
Q1401	A	C	2B
Q1402	B	C	1B
Q1403	B	C	1B
Q1601	A	C	2B
Q2201	B	C	4C
Q2202	B	C	4C
Q2401	B	C	4D
Q2402	B	C	5C
Q2601	B	C	4D
Q2602	B	C	4D
Q2603	B	C	4D
Q2604	B	C	5D
Q3501	B	C	3D
Q3502	B	C	3D
Q3503	B	C	3D
Q3504	B	C	3C
Q3505	B	C	3D
Q3506	B	C	3D
Q3701	A	C	5A
Q3702	A	C	5A
Q3703	A	C	5B
Q3704	A	C	5B
Q3705	A	C	5B
Q3706	A	C	5B
Q3707	A	C	5B
Q3708	A	C	5A
Q3709	A	C	5B
Q3710	A	C	5B
Q3711	A	C	5B
Q4302	A	C	4B
Q4306	A	C	4B
Q4307	A	C	4B
Q4803	B	C	5B
Q4851	B	C	4B
Q6111	B	C	2C
Q6112	B	C	2C
Q6121	B	C	1C
Q6122	B	C	1C
Q6123	A	C	1D
Q6124	B	C	1D
Q6131	B	C	2C
Q6132	A	C	2C
Q6141	A	C	1C
Q6151	A	C	2B
Q6161	A	C	2D
Q6162	B	C	3C
Q6163	B	C	2C
Q6164	B	C	3C
Q6165	B	C	2C
Q6166	B	C	2C
Q6167	B	C	2C
Q6168	B	C	2C
Q6201	A	C	2C
Q6202	A	C	2D
Q6203	A	C	2C
Q6301	A	C	3D
Q6302	A	C	3D
Q6303	A	C	3D
Q6304	A	C	3D
Q6305	A	C	2C

RESISTOR

REF.No.	LOCATION		
R1001	B	C	3C
R1002	B	C	3B
R1003	B	C	3C
R1004	B	C	3C
R1005	B	C	1C
R1006	B	C	4A
R1007	B	C	3B
R1008	B	C	4A
R1009	B	C	4B
R1010	B	C	2C
R1011	B	C	3C
R1012	B	C	1A
R1013	B	C	2B
R1014	B	C	2B
R1015	B	C	2B
R1016	B	C	4B
R1017	B	C	2B
R1018	B	C	2B
R1021	B	C	2B
R1022	B	C	4A
R1025	B	C	2B
R1026	B	C	2B
R1030	B	C	4A
R1034	B	C	2B
R1035	B	C	4A
R1037	B	C	2C
R1038	B	C	2C
R1039	B	C	2C
R1042	B	C	4A
R1043	B	C	4A
R1045	B	C	2C
R1046	B	C	2B
R1047	B	C	2B
R1048	B	C	4A
R1049	B	C	4A
R1050	B	C	3C
R1051	B	C	2C
R1052	B	C	4A
R1053	B	C	4A
R1054	B	C	4A
R1055	B	C	3A
R1056	B	C	3A
R1057	B	C	4A
R1058	B	C	5B
R1059	B	C	4A
R1060	B	C	2B
R1062	B	C	3A
R1063	B	C	1B
R1065	B	C	2B
R1066	B	C	4B

REF.No.	LOCATION		
R1067	B	C	2B
R1068	B	C	3C
R1069	B	C	4B
R1070	B	C	4B
R1071	B	C	3B
R1072	B	C	3B
R1073	B	C	3B
R1074	B	C	3B
R1076	B	C	2B
R1077	B	C	2B
R1078	B	C	2B
R1079	B	C	2B
R1080	B	C	4A
R1081	B	C	4A
R1082	B	C	2C
R1083	B	C	2C
R1084	B	C	2C
R1085	B	C	2C
R1302	B	C	4C
R1307	B	C	4B
R1308	B	C	3B
R1309	B	C	3B
R1310	B	C	3B
R1311	B	C	3C
R1401	B	C	5C
R1408	B	C	1B
R1410	A	C	2B
R1412	A	C	2B
R1413	A	C	2B
R1414	A	C	3B
R1415	A	C	2B
R1420	B	C	1B
R1427	A	C	2B
R1428	A	C	2B
R1429	A	C	2B
R1430	A	C	2B
R1431	A	C	2B
R1432	A	C	2B
R1433	A	C	2B
R1434	A	C	2B
R1435	A	C	2B
R1438	A	C	2A
R1439	A	C	2A
R1444	A	C	3B
R1445	A	C	2B
R1446	A	C	2A
R1447	A	C	3B
R1450	A	C	3B
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R1460	B	C	1A
R1461	B	C	1A
R1464	B	C	1B
R1465	B	C	5C
R1466	A	C	3B
R1467	A	C	3B
R1468	A	C	3B
R1469	A	C	3B
R1470	A	C	3B
R1471	B	C	1B
R1472	B	C	1B
R1474	A	C	3B
R1475	B	C	1B
R1476	B	C	1B
R1477	A	C	2B
R1478	B	C	1B
R1480	A	C	3B
R1601	A	C	1B
R1602	A	C	1B
R1603	A	C	1A
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R1613	A	C	1B
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R2205	B	C	4C
R2206	B	C	4C
R2207	B	C	4C
R2208	B	C	4B
R2209	B	C	4C
R2213	B	C	4C
R2214	B	C	4C
R2401	B	C	4C
R2402	B	C	4C
R2403	B	C	4C
R2404	B	C	5D
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R3060	A	C	3C
R3062	A	C	4B
R3063	A	C	4B
R3101	A	C	5B
R3102	A	C	5B
R3103	A	C	4C
R3105	A	C	5B
R3106	A	C	4C
R3113	A	C	4C
R3115	A	C	5C
R3117	A	C	5C
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R3522	B	C	3D
R3523	B	C	3D
R3524	B	C	3D
R3530	B	C	3D
R3701	A	C	5A
R3702	A	C	5A
R3703	A	C	5A
R3704	A	C	5A
R3705	A	C	5B
R3706	A	C	5A
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R5513	B	C	3A
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R5515	B	C	3A
R5516	B	C	3A
R6001	A	C	2D
R6002	A	C	2D
R6009	A	C	3D
R6010	A	C	3D
R6011	A	C	3D
R6012	A	C	2D
R6111	B	C	2C
R6112	A	C	2C
R6113	A	C	2C
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R6151	A	C	2B
R6152	B	C	1C
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R6154	B	C	1C
R6161	A	C	2D
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R6170	B	C	2C
R6171	B	C	3C
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R6176	B	C	2C
R6177	B	C	2C
R6178	B	C	2C
R6179	B	C	3C
R6180	B	C	2C
R6181	B	C	2C
R6182	A	C	2D
R6183	B	C	3C
R6201	A	C	2C
R6202	A	C	2C
R6203	A	C	2C
R6204	B	C	2D
R6205	B	C	2D
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R6303	A	C	3D
R6304	A	C	2D
R6305	A	C	2D
R6306	A	C	2D
R6307	A	C	3D
R6308	A	C	3D
R6907	A	C	2D
R6914	A	C	3D
RA1001	B	C	2B
RA1002	B	C	2B
RA1003	B	C	2B
RA1004	B	C	2B
RA1005	B	C	4A
RA1006	B	C	4A
RA1401	B	C	1B
RA1402	B	C	1B
RA1403	A	C	2B
RA4301	A	C	4A
RA4302	A	C	4A
RA4303	A	C	4A
RA4304	A	C	3A
RA4305	A	C	3A
RA4306	A	C	2A

TEST POINT

TP6001	A	C	2D

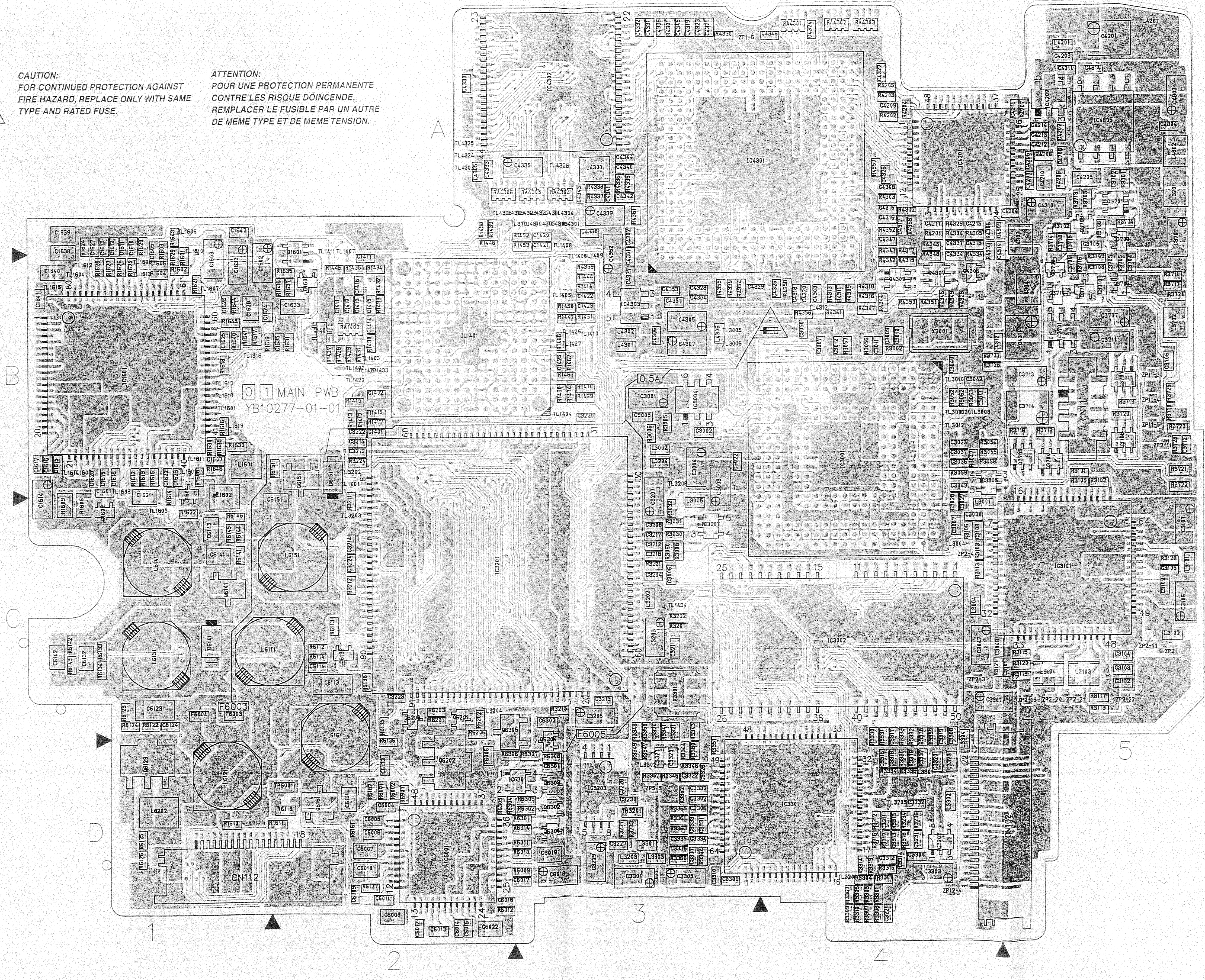
OTHER

REF.No.	LOCATION		
F6001	B	C	1C
F6003	A	C	1C
F6004	A	C	1C
F6005	A	C	2D
TH3201	A	C	3D
TH3301	A	C	4D
TL1001	B	C	2C
TL1004	B	C	2A
TL1006	B	C	4B
TL1007	B	C	4B
TL1008	B	C	3A
TL1009	B	C	3A
TL1401	A	C	2B
TL1402	A	C	2B
TL1403	A	C	2B
TL1404	A	C	3B
TL1405	A	C	3B
TL1406	A	C	3B
TL1407	A	C	2B
TL1408	A	C	3A
TL1409	A	C	3B
TL1410	A	C	3B
TL1411	A	C	2B
TL1422	A	C	2B
TL1423	A	C	2B
TL1426	A	C	3B
TL1427	A	C	3B
TL1433	A	C	2B
TL1434	A	C	3C
TL1601	A	C	1B
TL1602	A	C	1B
TL1603	A	C	1B
TL1604	A	C	1B
TL1605	A	C	1C
TL1606	A	C	1A
TL1607	A	C	1B
TL1608	A	C	1B
TL1609	A	C	1B
TL1610	A	C	1A
TL1611	A	C	1B
TL1612	A	C	1B
TL1613	A	C	1B
TL1614	A	C	1B
TL1615	A	C	1B
TL1616	A	C	1B
TL1617	A	C	1B
TL1618	A	C	1B
TL1619	A	C	1B
TL3004	A	C	4C
TL3005	A	C	3B
TL3006	A	C	3B
TL3007	A	C	4B
TL3008	A	C	4B
TL3010	A	C	4B
TL3011	A	C	4B
TL3012	A	C	4B
TL3201	A	C	4D
TL3202	A	C	2B
TL3203	A	C	2C
TL3204	A	C	2C
TL3205	A	C	4D
TL3206	A	C	3B
TL3301	A	C	4D
TL3302	A	C	3D
TL3701	A	C	3A
TL4201	A	C	5A
TL4301	A	C	3A
TL4302	A	C	2A
TL4303	A	C	3A
TL4304	A	C	3A
TL4305	A	C	3A
TL4308	A	C	2A
TL4309	A	C	3A
TL4310	A	C	3A
TL4311	A	C	3A
TL4312	A	C	4B
TL4319	B	C	5A
TL4320	B	C	5A
TL4321	B	C	5A
TL4322	B	C	5A
TL4323	B	C	5A
TL4324	A	C	2A
TL4325	A	C	2A
TL4326	A	C	3A
TL4327	A	C	3A
TL4328	A	C	3A
TL4801	B	C	5A
TL5501	B	C	3A
TL5502	B	C	3A
TL5503	B	C	3A
TL5504	B	C	4A
X1001	B	C	3C
X1002	B	C	2B
X3001	A	C	4B
X3301	A	C	3C
X5501	B	C	2A
ZP1-1	B	C	5D
ZP1-2	B	C	5D
ZP1-3	B	C	4D
ZP1-4	B	C	4B
ZP1-5	B	C	4B
ZP1-6	A	C	3A
ZP1-9	B	C	4D
ZP2-1	A	C	5C
ZP2-2	B	C	1C
ZP2-3	A	C	4C
ZP2-4	A	C	4C
ZP2-5	B	C	4B
ZP2-9	B	C	4B
ZP3-3	B	C	1D
ZP3-4	B	C	1D
ZP3-6	B	C	1D
ZP3-7	B	C	1C
ZP3-9	B	C	1C
ZP4-1	B	C	5C
ZP4-2	B	C	1A
ZP5-5	A	C	3D
ZP6-1	B	C	4D
ZP6-2	B	C	4D
ZP6-3	B	C	4D
ZP1-10	B	C	4D
ZP1-11	B	C	5C
ZP11-3	A	C	5B
ZP1-14	A	C	4B
ZP11-4	A	C	5B
ZP11-5	A	C	5B
ZP1-16	B	C	4D
ZP11-6	B	C	4D
ZP1-23	B	C	2D
ZP1-24	B	C	2C
ZP12-4	A	C	4D
ZP1-31	B	C	2B
ZP1-32	B	C	4B
ZP14-2	B	C	2B
ZP14-4	B	C	1B
ZP14-5	B	C	1B
ZP14-6	B	C	1B
ZP14-7	B	C	1B
ZP14-8	B	C	1B
ZP14-9	B	C	2A
ZP2-10	A	C	5C
ZP2-11	A	C	5B
ZP2-12	B	C	4D
ZP2-19	A	C	5C
ZP2-20	A	C	5C
ZP2-21	A	C	5C
ZP2-22	A	C	5C
ZP3-10	B	C	4B
ZP5-20	B	C	4C
ZP14-10	B	C	4A
ZP14-11	B	C	1A
ZP14-12	B	C	1B
ZP14-13	B	C	1C
ZP14-15	B	C	4B

COMPONENT SIDE (A)

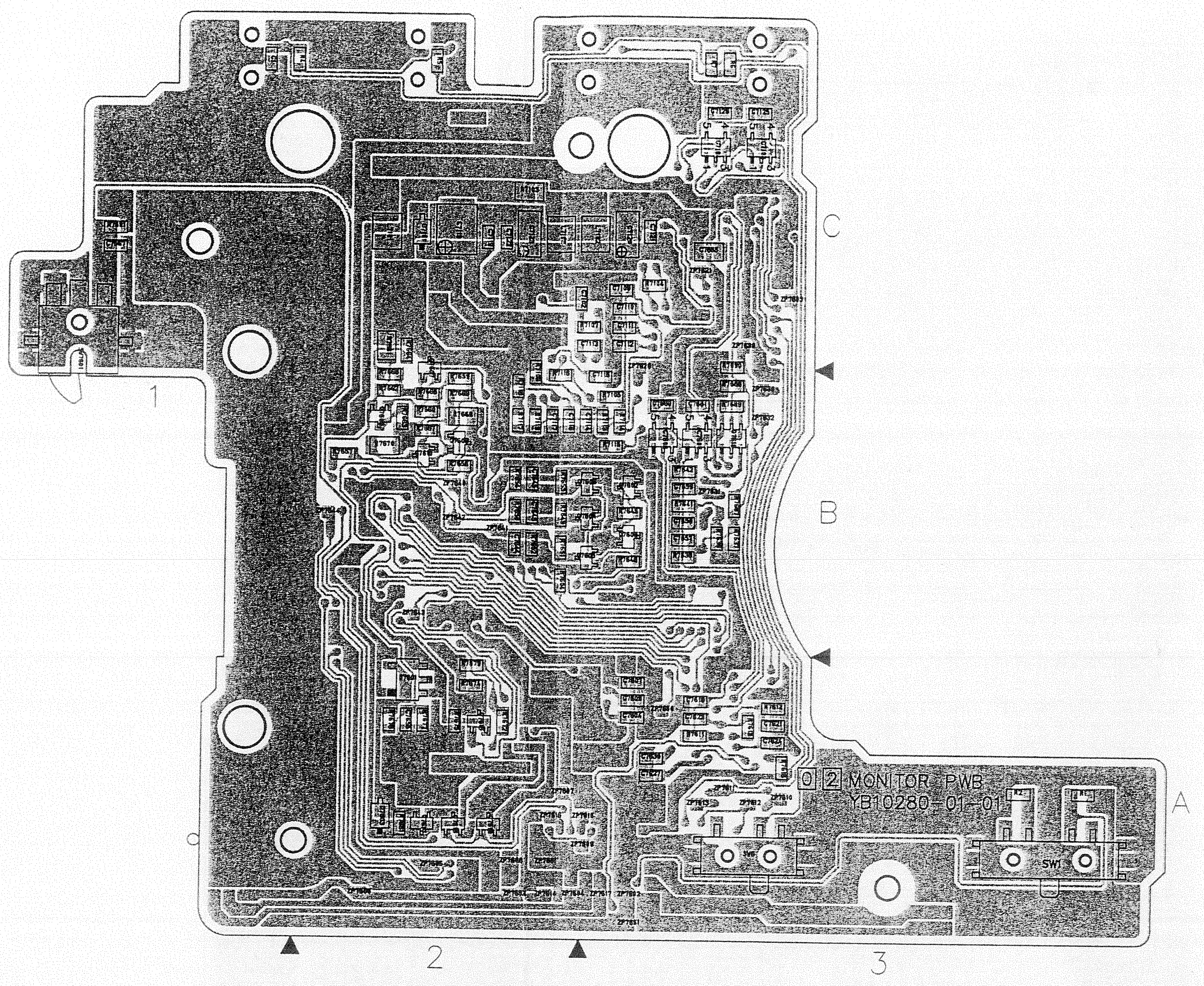
CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÓINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.

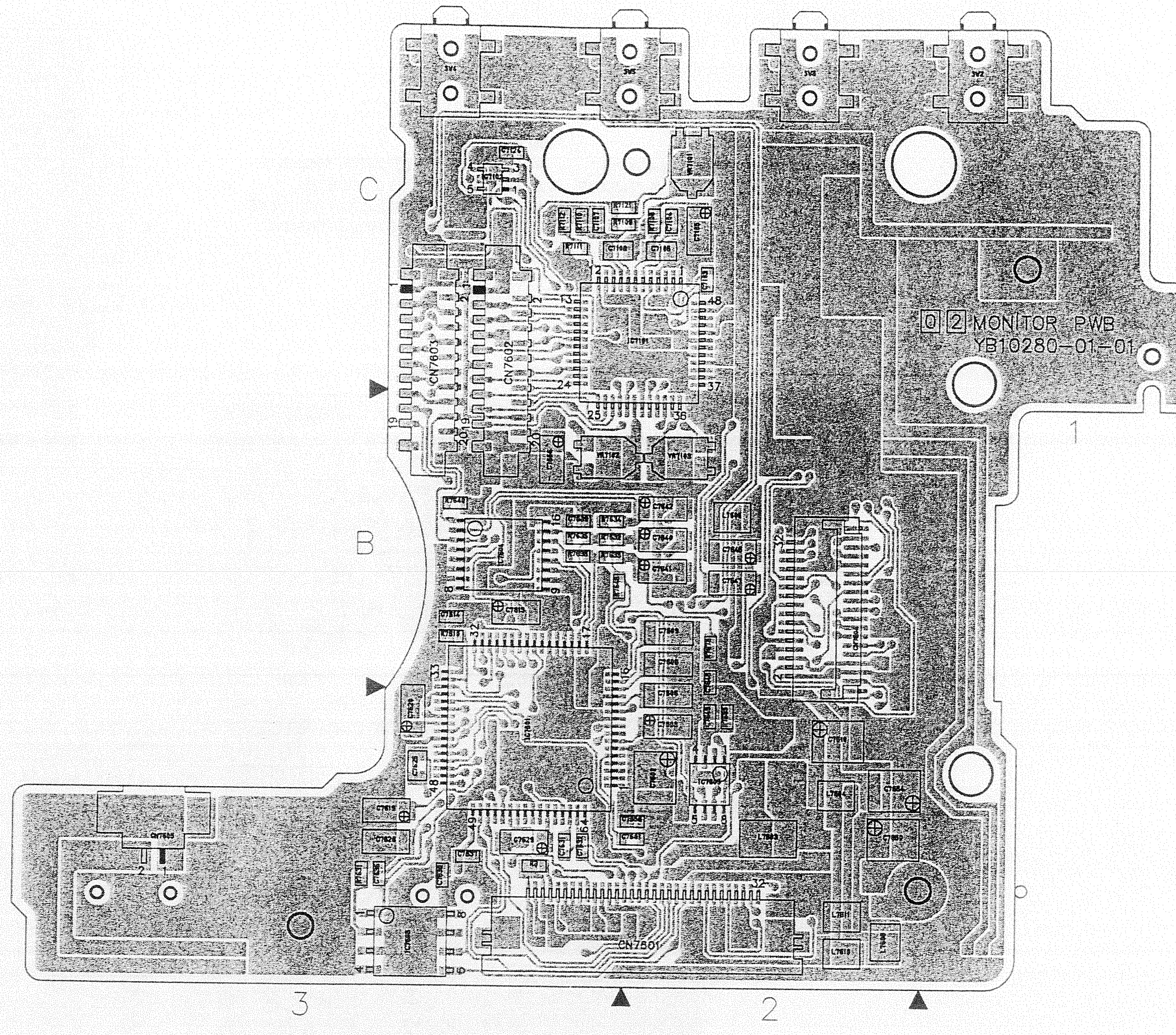

A
B
C
D
1
2
3
4
5
0 1 MAIN PWB
YB10277-01-01
IC4301
IC4201
IC4605
IC1401
IC1601
IC3001
IC3201
IC3101
IC3002
IC3301
IC6001
CN112
CN102
CN111
X3001
F6003
F6005
0.5A
L6141
L6151
L6131
L6111
L6121
L6161

4.24 MONITOR CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

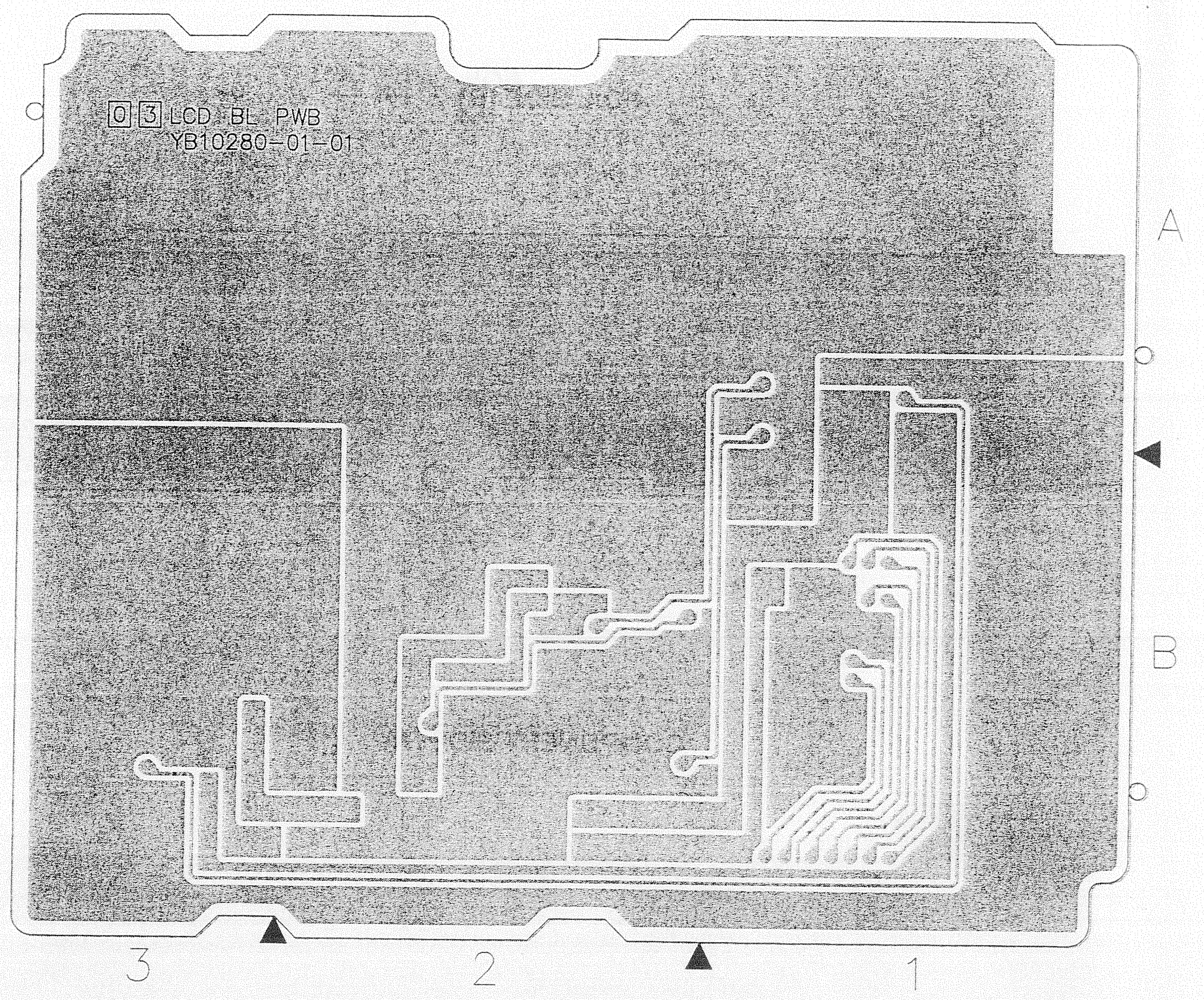


COMPONENT PARTS LOCATION GUIDE (MONITOR)

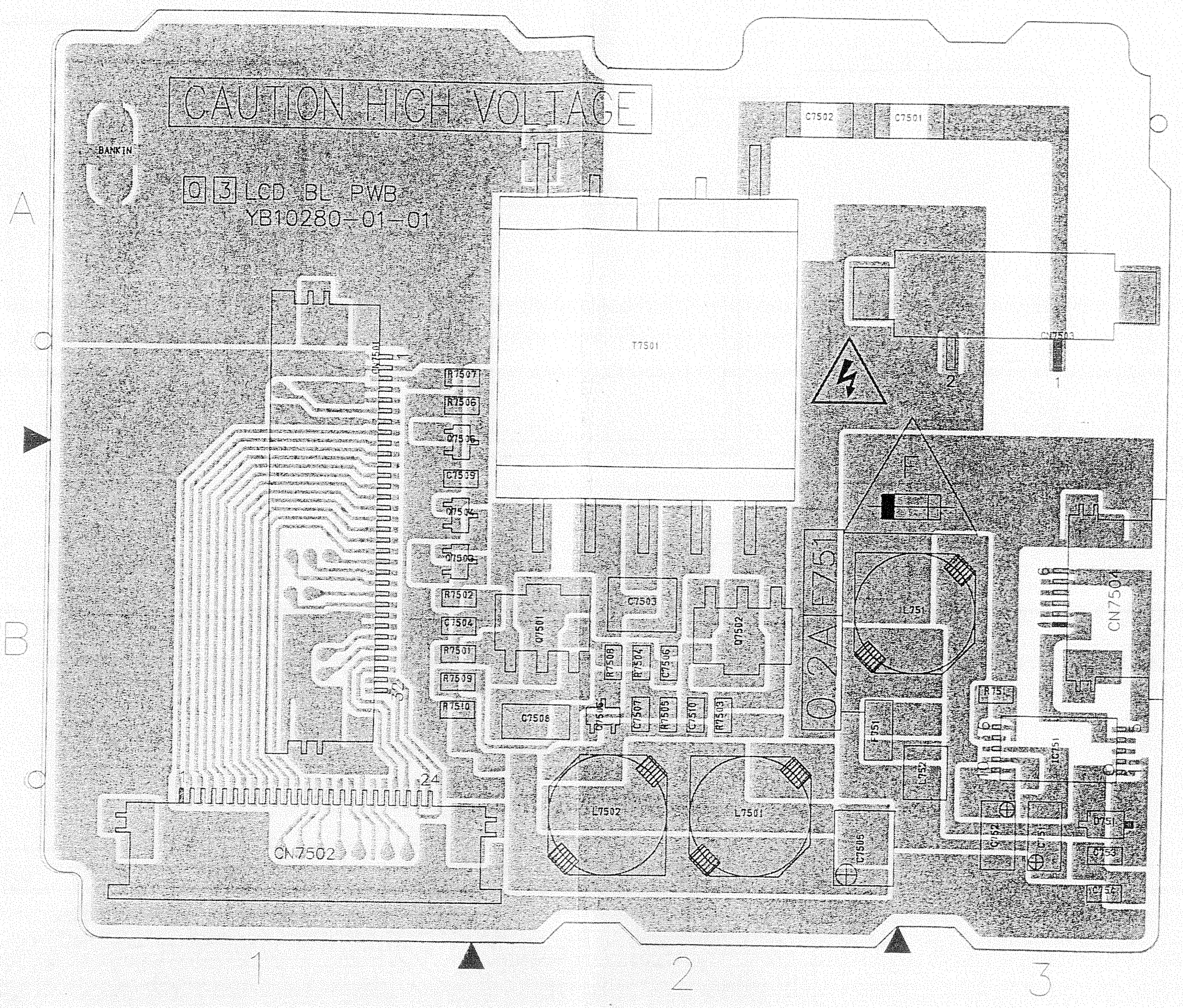
REF.No.	LOCATION		
CAPACITOR			
C1	B	C	1C
C7102	B	C	3C
C7103	A	C	2C
C7104	A	C	2C
C7105	A	C	2C
C7106	A	C	2C
C7107	A	C	3C
C7108	A	C	3C
C7109	B	C	3C
C7110	B	C	3C
C7111	B	C	3C
C7112	B	C	3C
C7113	B	C	3C
C7114	B	C	3B
C7115	B	C	3B
C7116	B	C	2B
C7117	B	C	2B
C7118	B	C	2C
C7119	B	C	2C
C7120	B	C	3C
C7121	B	C	3C
C7122	B	C	2C
C7123	B	C	2C
C7124	A	C	3C
C7125	B	C	3C
C7126	B	C	3C
C7601	A	C	3A
C7602	A	C	2A
C7603	A	C	2A
C7604	B	C	3A
C7605	B	C	3A
C7606	A	C	2A
C7607	B	C	3A
C7608	A	C	2B
C7609	A	C	2B
C7610	A	C	2A
C7614	A	C	3B
C7615	A	C	3B
C7618	B	C	3A
C7619	A	C	3A
C7620	A	C	3A
C7621	B	C	3A
C7623	B	C	3A
C7624	B	C	3A
C7625	A	C	3A
C7627	B	C	3A
C7628	A	C	3A
C7629	A	C	3A
C7630	B	C	3A
C7631	A	C	3A
C7632	A	C	3A
C7636	A	C	3A
C7637	A	C	3A
C7638	A	C	3A
C7639	A	C	3B
C7640	A	C	2B
C7641	A	C	2B
C7642	A	C	2B
C7643	B	C	2B
C7644	B	C	2B
C7645	B	C	2B
C7646	A	C	2B
C7647	A	C	2B
C7648	A	C	2B
C7649	A	C	2A
C7650	A	C	2A
C7654	A	C	2A
C7655	B	C	2A
C7656	A	C	3A
C7657	B	C	3B
C7658	B	C	3B
C7659	B	C	3B
C7660	B	C	3B
C7661	B	C	3B
C7665	B	C	3C
C7666	A	C	3B
C7667	B	C	1C
CONNECTOR			
CN7601	A	C	3A
CN7602	A	C	3C
CN7603	A	C	3C
CN7604	A	C	2B
DIODE			
D7101	B	C	2C
D7601	B	C	2A
D7603	B	C	2A
IC			
IC7101	A	C	2C
IC7102	A	C	3C
IC7103	B	C	3C
IC7104	B	C	3C
IC7601	A	C	3A
IC7603	A	C	3A
IC7604	A	C	3B
IC7605	A	C	2A
IC7606	B	C	3B
IC7607	B	C	3B
COIL			
L7101	B	C	2C
L7102	B	C	3C
L7103	B	C	2C
L7603	A	C	2A
L7604	A	C	2A
L7605	A	C	2B
L7608	A	C	2A
L7610	A	C	2A
L7611	A	C	2A
TRANSISTOR			
Q7602	B	C	3B
Q7603	B	C	3B
Q7604	B	C	3B
Q7605	B	C	3B
Q7606	B	C	3B
Q7607	B	C	2B
Q7608	B	C	2B
Q7609	B	C	2B
Q7610	B	C	2B
Q7615	B	C	2A
Q7616	B	C	2A
Q7617	B	C	2A
Q7618	B	C	2A
Q7619	B	C	3B
RESISTOR			
R1	B	C	3A
R2	B	C	3A
R3	A	C	3A
R4	B	C	2C
R5	B	C	2C
R6	B	C	3C
R7	B	C	3C
R7103	B	C	2C
R7104	B	C	3C
R7105	B	C	3B
R7106	B	C	2B
R7107	B	C	3C
R7108	A	C	2C
R7109	A	C	3C
R7110	A	C	3C
R7111	A	C	3C
R7112	A	C	3C
R7113	B	C	3B
R7114	B	C	3B
R7115	B	C	3B
R7116	B	C	2B
R7117	B	C	2B
R7118	B	C	2B
R7119	B	C	2B
R7121	A	C	3C
R7604	B	C	2B
R7610	A	C	3B
R7611	B	C	3A
R7612	B	C	3A
R7613	B	C	3A
R7616	B	C	3A
R7631	A	C	3A
R7632	A	C	3B
R7633	A	C	3B
R7634	A	C	3B
R7635	A	C	3B
R7636	A	C	3B
R7637	B	C	3B
R7638	B	C	3B
R7639	B	C	3B
R7640	A	C	3B
R7641	B	C	3B
R7642	B	C	3B
R7643	A	C	3B
R7645	B	C	3B
R7646	B	C	3B
R7649	B	C	2B
R7650	B	C	2B
R7651	B	C	2B
R7652	B	C	2B
R7653	B	C	2B
R7654	B	C	2B
R7656	B	C	2B
R7657	B	C	2B
R7659	B	C	2B
R7660	B	C	2B
R7661	B	C	2C
R7662	B	C	2B
R7663	B	C	2B
R7664	B	C	2C
R7665	B	C	2B
R7666	B	C	2B
R7667	B	C	2B
R7668	B	C	2B
R7669	B	C	2B
R7670	B	C	2B
R7672	B	C	2A
R7673	A	C	2B
R7674	B	C	2A
R7675	B	C	2A
R7677	B	C	2A
R7678	B	C	2A
R7679	B	C	2A
R7681	B	C	2A
R7685	A	C	2A
R7687	B	C	3B
R7688	B	C	3B
R7689	B	C	3B
R7690	B	C	3C
R7691	B	C	1C
VR7101	A	C	2C
VR7102	A	C	3B
VR7103	A	C	2B
OTHER			
SW1	B	C	3A
SW2	A	C	1C
SW3	A	C	2C
SW4	A	C	3C
SW5	A	C	3C
SW6	B	C	3A
SW7601	B	C	1C
ZP7601	B	C	2A
ZP7602	B	C	3A
ZP7603	B	C	3C
ZP7604	B	C	3A
ZP7605	B	C	2A
ZP7606	B	C	2A
ZP7607	B	C	2A
ZP7608	B	C	2A
ZP7609	B	C	3A
ZP7610	B	C	3A
ZP7611	B	C	3A
ZP7612	B	C	3A
ZP7613	B	C	3A
ZP7614	B	C	2A
ZP7615	B	C	3A
ZP7616	B	C	2A
ZP7617	B	C	3A
ZP7620	B	C	3C
ZP7621	B	C	3C
ZP7630	B	C	3B
ZP7631	B	C	3B
ZP7632	B	C	3B
ZP7633	B	C	3C
ZP7640	B	C	2B
ZP7641	B	C	2B
ZP7642	B	C	2B
ZP7643	B	C	2B
ZP7644	B	C	2B
ZP7650	B	C	3A
ZP7651	B	C	3A
ZP7652	B	C	2A

4.25 LCD BL CIRCUIT BOARD

FOIL SIDE (B)


03 LCD BL PWB
YB10280-01-01
A
B
3
2
1

COMPONENT SIDE (A)


CAUTION HIGH VOLTAGE
BANKIN
03 LCD BL PWB
YB10280-01-01
A
B
C7502
C7501
T7501
CN7501
2
1
F
0.2A F751
L751
CN7504
Q7501
Q7502
C7503
C7508
L7502
L7501
24
CN7502
1
2
3

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE.

ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE DÖINCENDE, REMPLACER LE FUSIBLE PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.

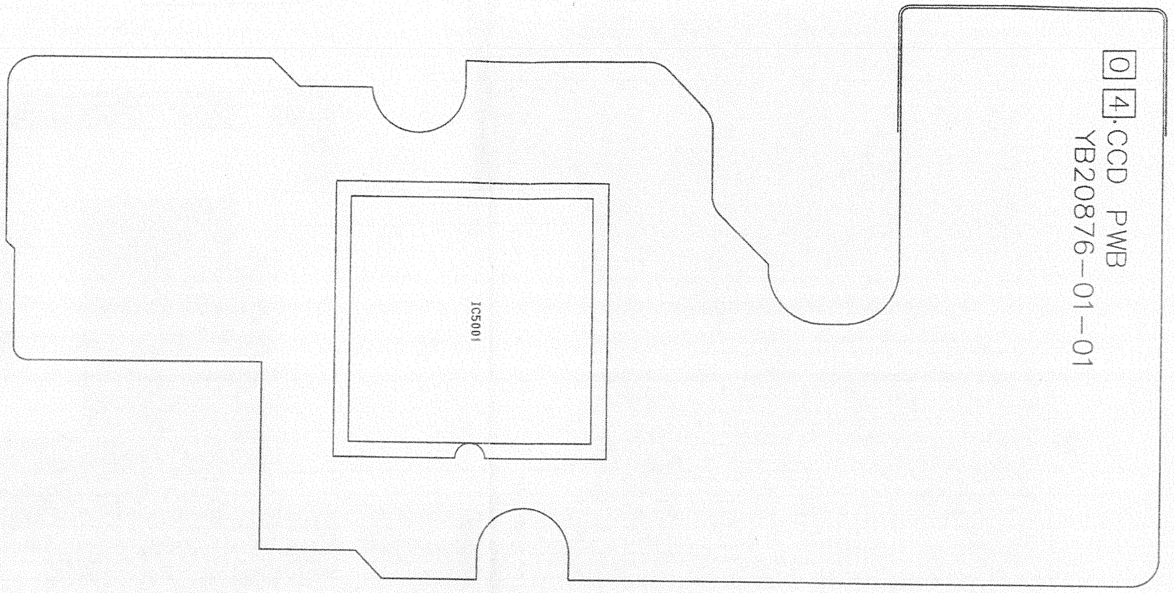
COMPONENT PARTS LOCATION GUIDE (LCD BL)

REF.No.	LOCATION		
CAPACITOR			
C751	A	C	3B
C752	A	C	3B
C753	A	C	3B
C754	A	C	3B
C7501	A	C	3A
C7502	A	C	2A
C7503	A	C	2B
C7504	A	C	1B
C7505	A	C	2B
C7506	A	C	2B
C7507	A	C	2B
C7508	A	C	2B
C7509	A	C	1B
C7510	A	C	2B
CONNECTOR			
CN7501	A	C	1A
CN7502	A	C	1B
CN7503	A	C	3A
CN7504	A	C	3B
DIODE			
D751	A	C	3B
IC			
IC751	A	C	3B
COIL			
L751	A	C	3B
L752	A	C	3B
L7501	A	C	2B
L7502	A	C	2B
TRANSISTOR			
Q7501	A	C	2B
Q7502	A	C	2B
Q7503	A	C	1B
Q7504	A	C	1B
Q7505	A	C	2B
Q7506	A	C	1A
RESISTOR			
R751	A	C	3B
R7501	A	C	1B
R7502	A	C	1B
R7503	A	C	2B
R7504	A	C	2B
R7505	A	C	2B
R7506	A	C	1A
R7507	A	C	1A
R7508	A	C	2B
R7509	A	C	1B
R7510	A	C	1B
OTHER			
T7501	A	C	2A
F751	A	C	2B

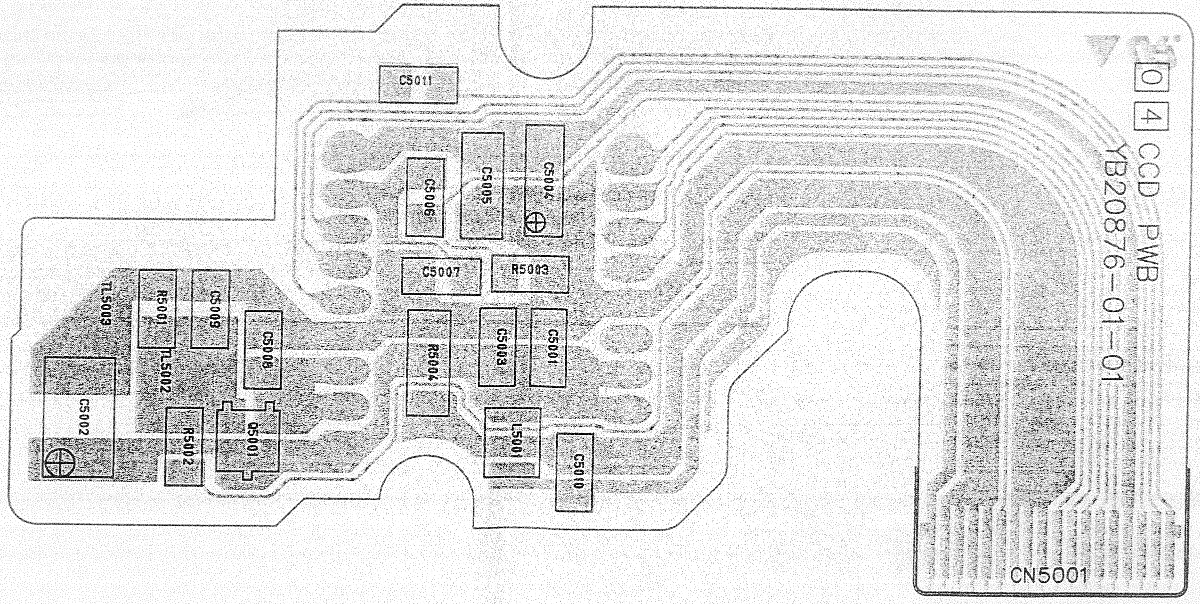
4.26 CCD AND JUNCTION CIRCUIT BOARDS

— CCD —

FOIL SIDE (B)

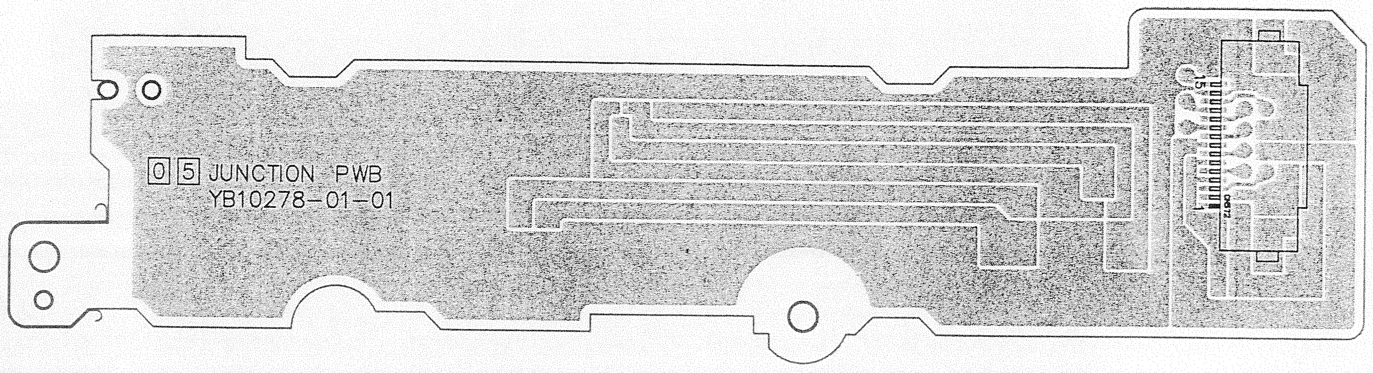

0 4 CCD PWB
YB20876-01-01
IC5001

COMPONENT SIDE (A)

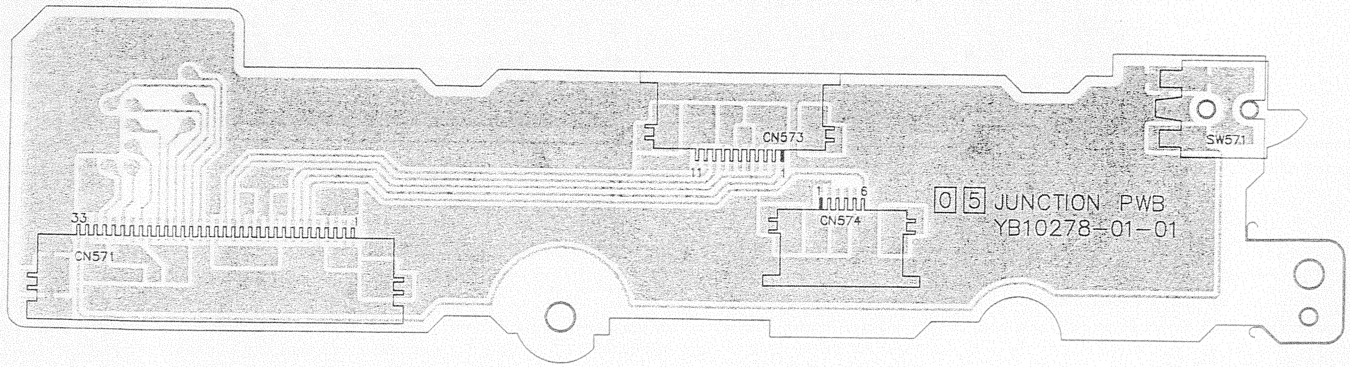

0 4 CCD PWB
YB20876-01-01
C5011
C5006
C5005
C5004
C5007
R5003
TL5003
R5001
C5009
TL5002
C5008
R5004
C5003
C5001
C5002
R5002
Q5001
L5001
C5010
CN5001

— JUNCTION —

FOIL SIDE (B)


0 5 JUNCTION PWB
YB10278-01-01

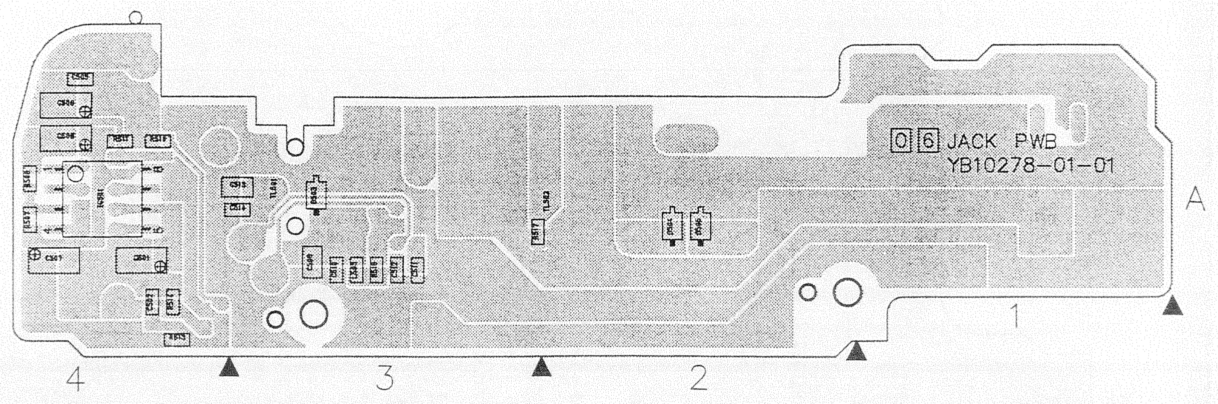
COMPONENT SIDE (A)


CN573
11
1
6
33
CN574
CN571
SW571
0 5 JUNCTION PWB
YB10278-01-01

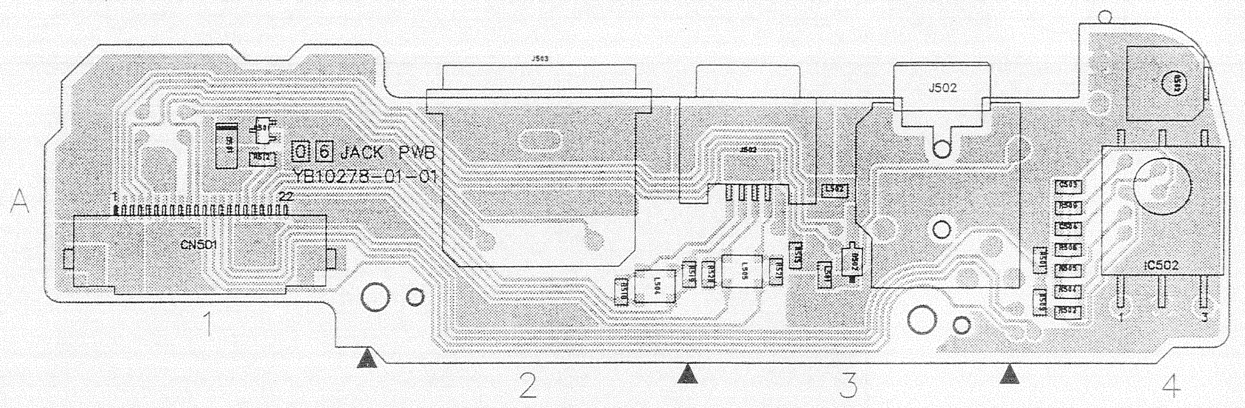
4.27 JACK, REAR AND B/W VF CIRCUIT BOARDS

— JACK —

FOIL SIDE (B)

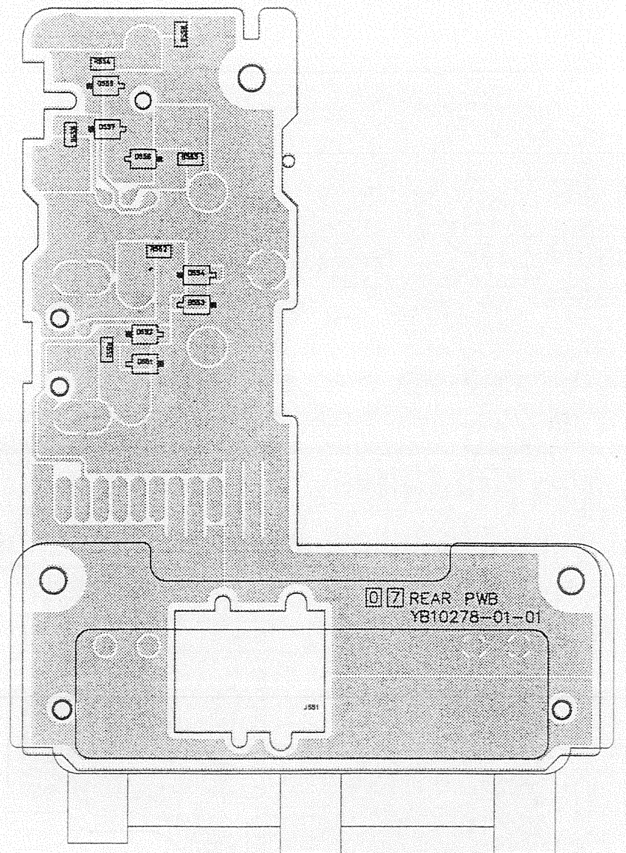

06 JACK PWB
YB10278-01-01
A
1
2
3
4

COMPONENT SIDE (A)

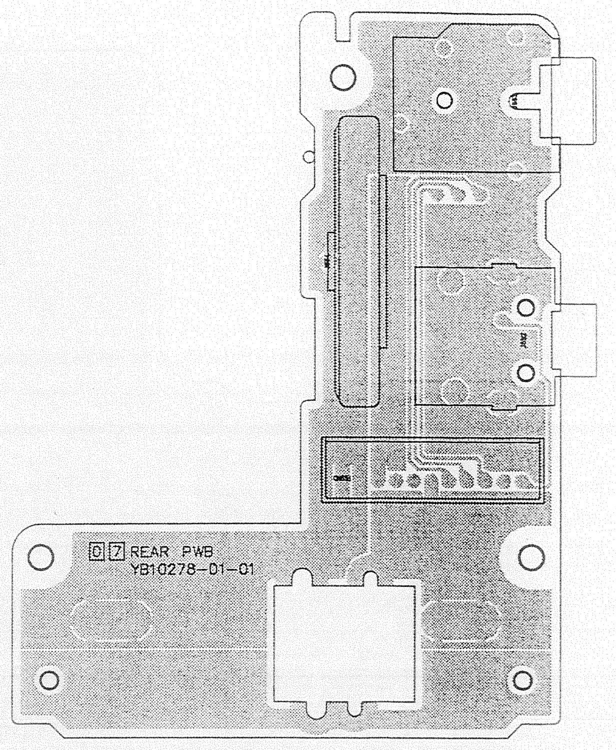

J503
J502
06 JACK PWB
YB10278-01-01
A
1
22
CN501
IC502
1
2
3
4

— REAR —

FOIL SIDE (B)

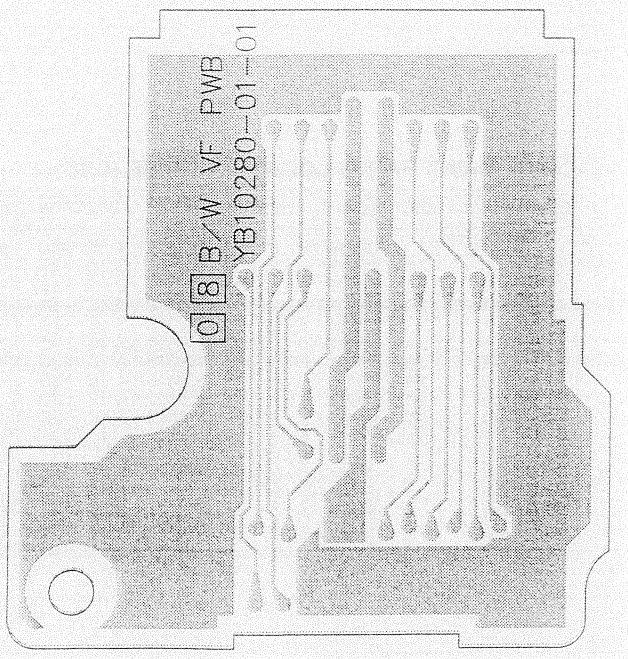

07 REAR PWB
YB10278-01-01

COMPONENT SIDE (A)

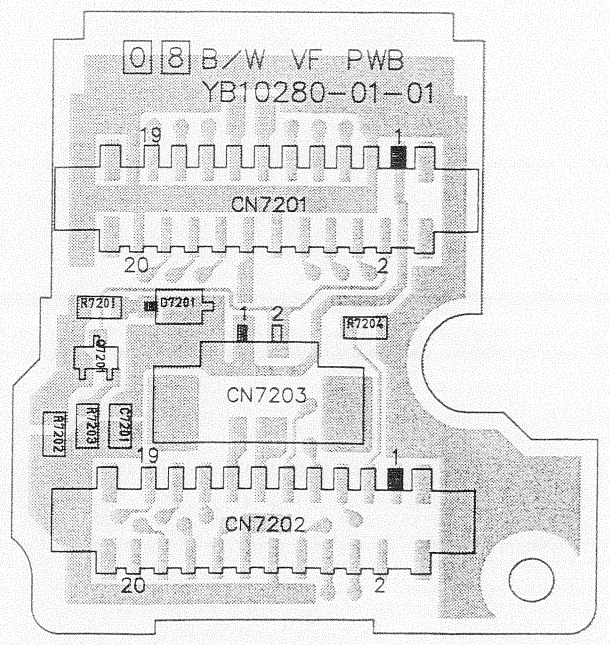

07 REAR PWB
YB10278-01-01

— B/W VF —

FOIL SIDE (B)


08 B/W VF PWB
YB10280-01-01

COMPONENT SIDE (A)

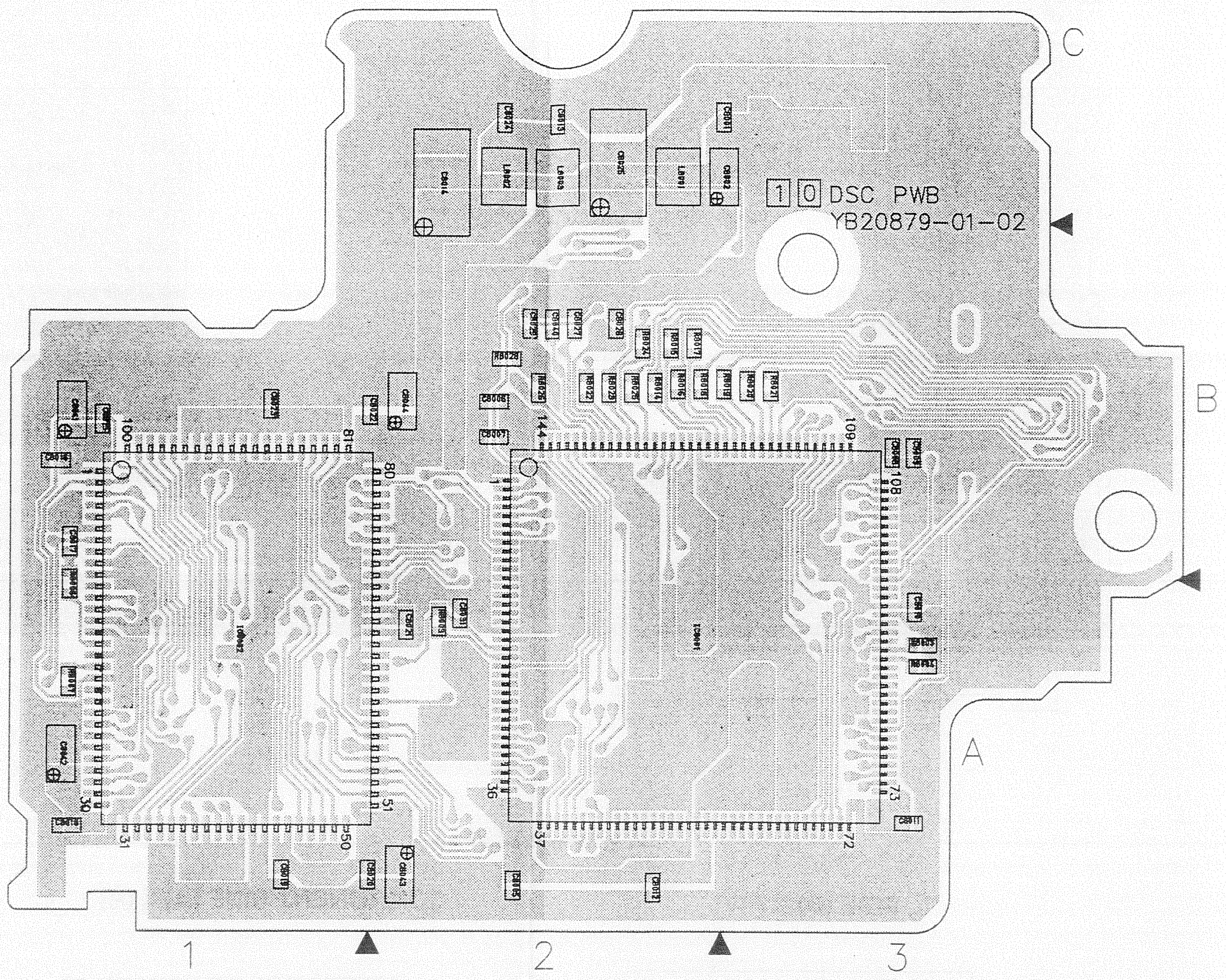

08 B/W VF PWB
YB10280-01-01
19
1
CN7201
20
2
R7201
D7201
R7204
Q7201
1
2
CN7203
R7202
R7203
C7201
19
1
CN7202
20
2

COMPONENT PARTS LOCATION GUIDE (JACK)

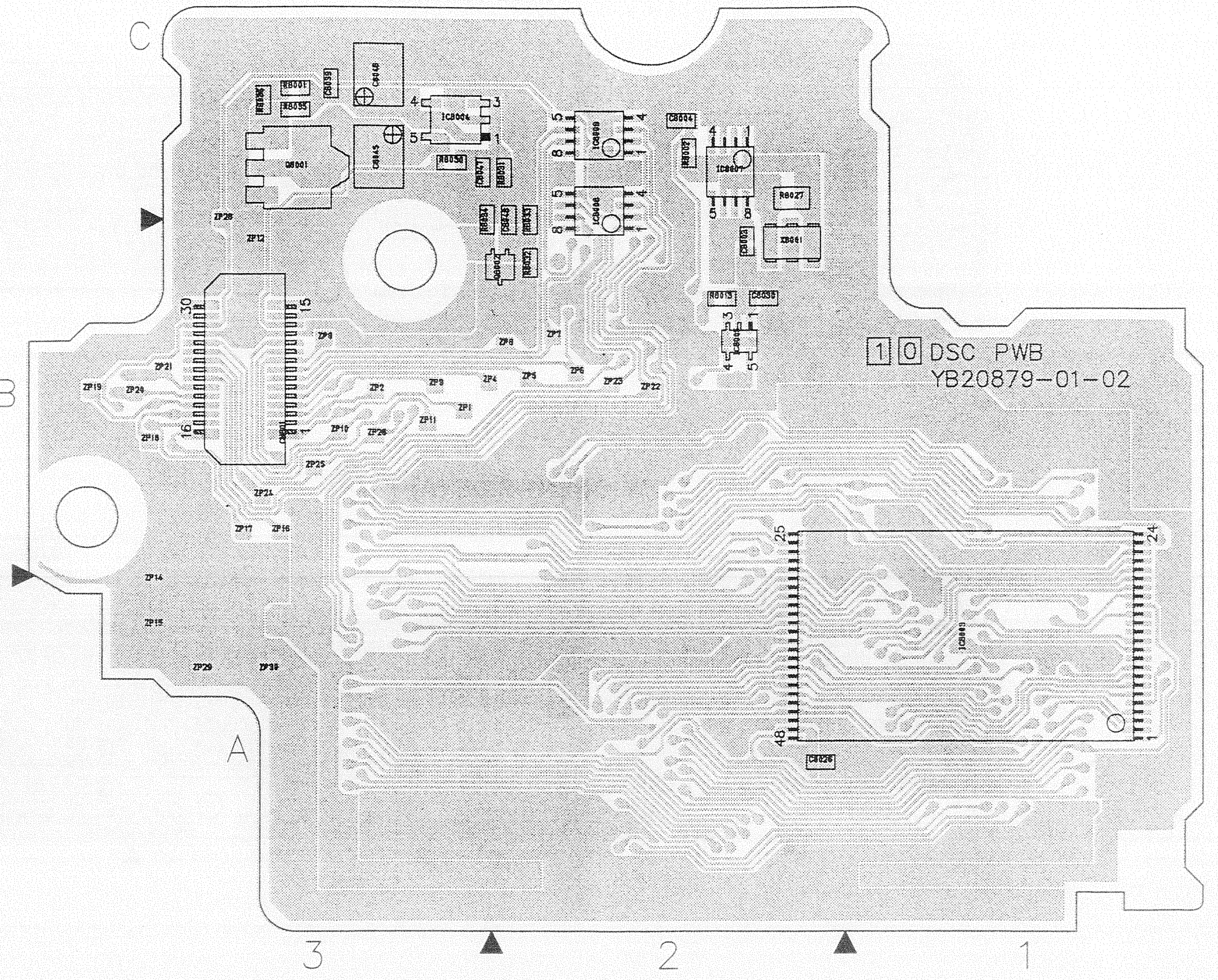
REF.No.	LOCATION		
CAPACITOR			
C501	B	C	4A
C502	B	C	4A
C503	A	C	4A
C504	A	C	4A
C505	B	C	4A
C506	B	C	4A
C507	B	C	4A
C508	B	C	4A
C509	B	C	3A
C510	B	C	3A
C511	B	C	3A
C512	B	C	3A
C513	B	C	3A
C514	B	C	3A
CONNECTOR			
CN501	A	C	1A
DIODE			
D501	A	C	1A
D502	A	C	3A
D503	B	C	3A
D504	B	C	2A
D505	B	C	2A
IC			
IC501	B	C	4A
IC502	A	D	4A
COIL			
L501	A	C	3A
L502	A	C	3A
L503	B	C	3A
L504	A	C	2A
L505	A	C	3A
TRANSISTOR			
Q501	A	C	1A
Q502	A	D	4A
RESISTOR			
R501	A	C	4A
R502	A	C	4A
R503	A	C	4A
R504	A	C	4A
R505	A	C	4A
R506	A	C	4A
R507	B	C	4A
R508	B	C	4A
R509	A	C	4A
R510	B	C	4A
R511	B	C	4A
R512	A	C	1A
R513	B	C	4A
R514	B	C	4A
R515	A	C	3A
R516	B	C	3A
R517	B	C	3A
R518	A	C	2A
R519	A	C	3A
R520	A	C	3A
R521	A	C	3A
OTHER			
J501	A	D	3A
J502	A	C	3A
J503	A	D	2A
TL501	B	C	3A
TL502	B	C	2A

4.28 DSC CIRCUIT BOARD

FOIL SIDE (B)



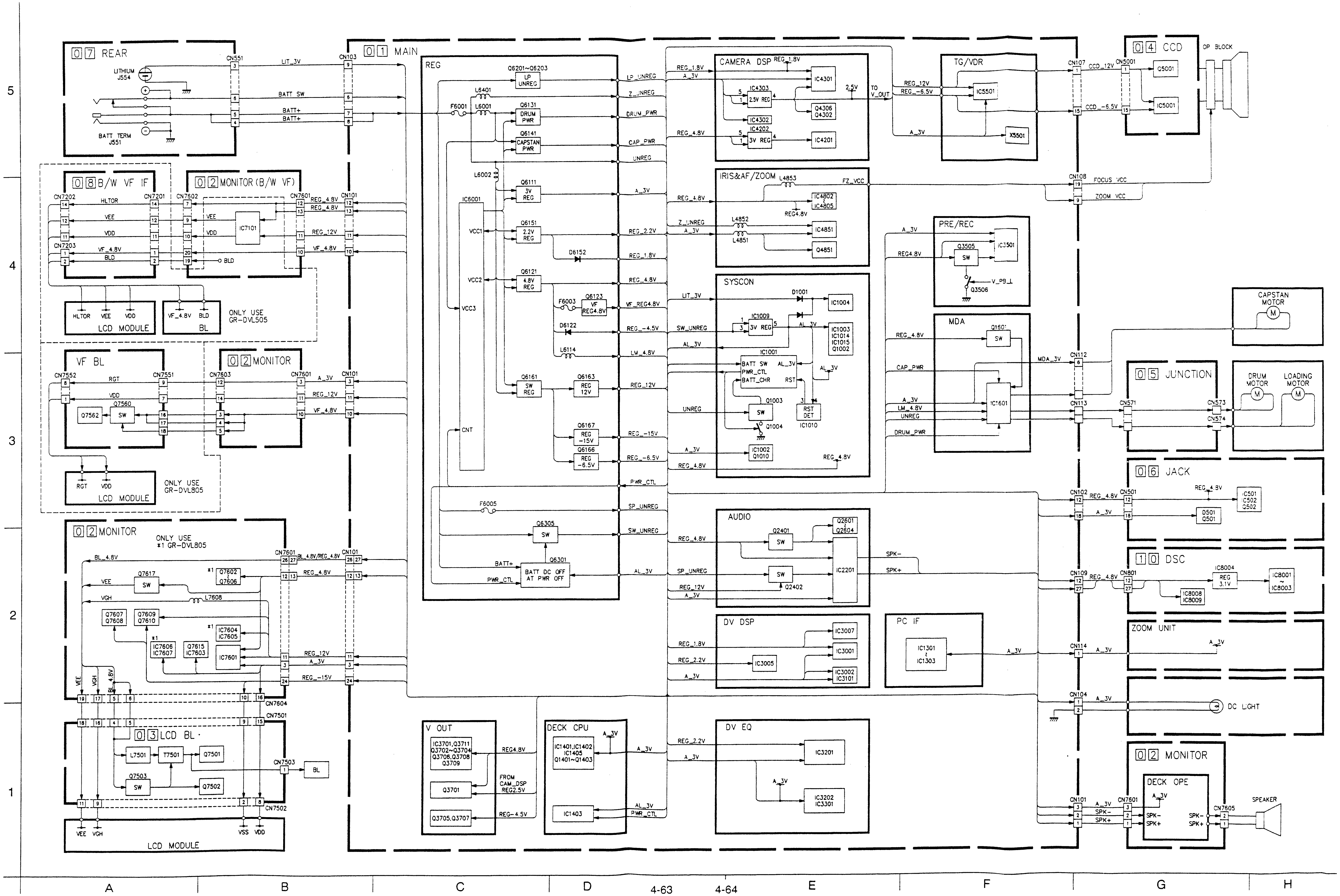
COMPONENT SIDE (A)



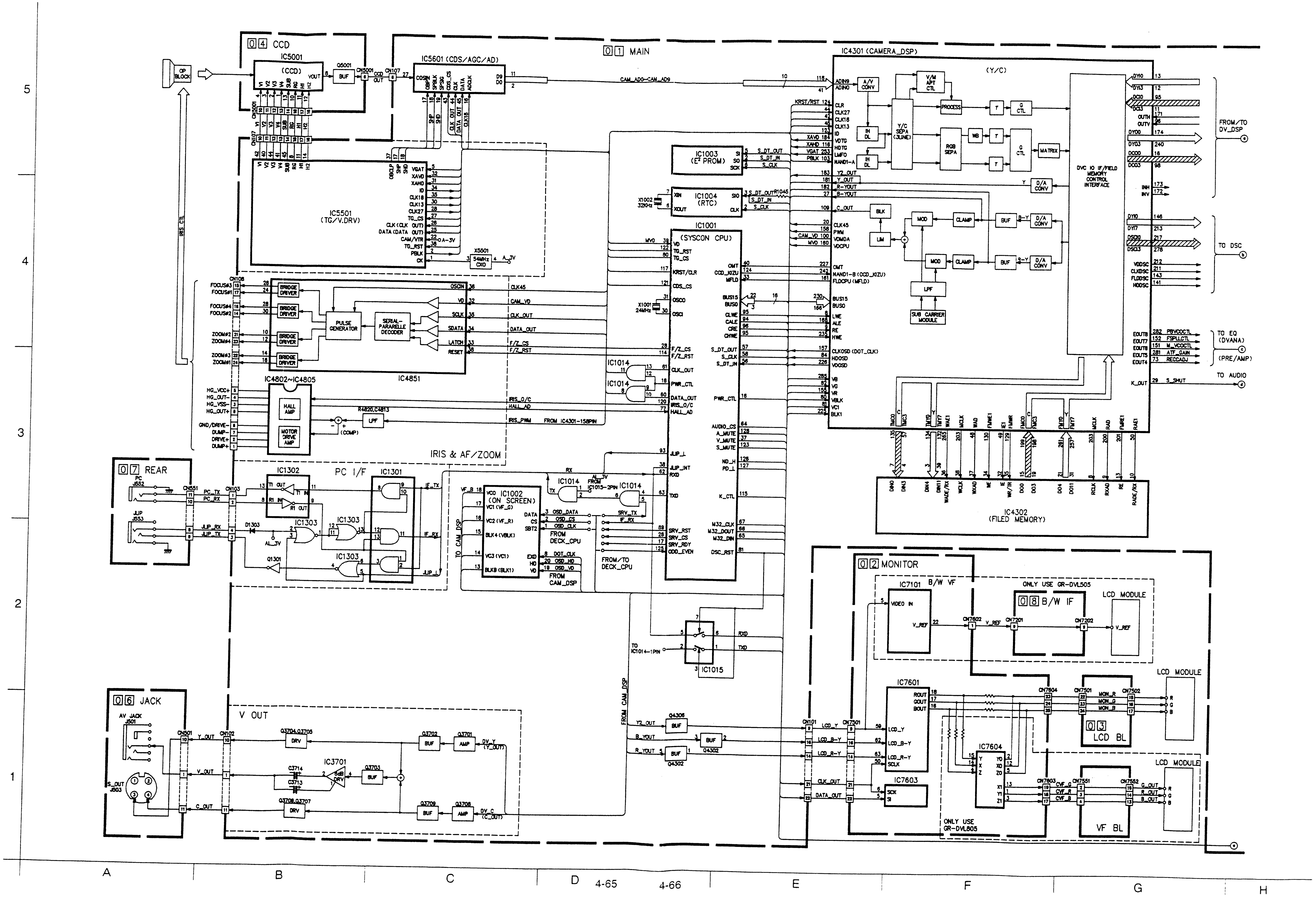
COMPONENT PARTS LOCATION GUIDE (DSC)

REF.No.	LOCATION		
CAPACITOR			
C8001	B	C	3C
C8002	B	C	3C
C8003	A	C	2B
C8004	A	C	2C
C8005	B	C	2A
C8006	B	C	2B
C8007	B	C	2B
C8008	B	C	3B
C8009	B	C	3B
C8010	B	C	3A
C8011	B	C	3A
C8012	B	C	2A
C8013	B	C	2C
C8014	B	C	2C
C8015	B	C	1B
C8016	B	C	1B
C8017	B	C	1B
C8018	B	C	1A
C8019	B	C	1A
C8020	B	C	2A
C8021	B	C	2A
C8022	B	C	2B
C8023	B	C	1B
C8024	B	C	2C
C8025	B	C	2C
C8026	A	C	2A
C8027	B	C	2B
C8028	B	C	2B
C8029	B	C	2B
C8030	A	C	2B
C8031	B	C	2A
C8039	A	C	3C
C8040	B	C	2B
C8041	B	C	1B
C8042	B	C	1A
C8043	B	C	2A
C8044	B	C	2B
C8045	A	C	3C
C8046	A	C	3C
C8047	A	C	3C
C8048	A	C	2C
CONNECTOR			
CN801	A	C	3B
IC			
IC8001	B	C	2A
IC8002	B	C	1A
IC8003	A	C	1A
IC8004	A	C	3C
IC8005	A	C	2B
IC8007	A	C	2C
IC8008	A	C	2C
IC8009	A	C	2C
COIL			
L8001	B	C	2C
L8002	B	C	2C
L8003	B	C	2C
TRANSISTOR			
Q8001	A	C	3C
Q8002	A	C	2B
RESISTOR			
R8001	A	C	3C
R8002	A	C	2C
R8003	B	C	2A
R8004	B	C	3A
R8005	B	C	3A
R8006	B	C	1B
R8007	B	C	1A
R8013	A	C	2B
R8014	B	C	2B
R8015	B	C	2B
R8016	B	C	2B
R8017	B	C	2B
R8018	B	C	2B
R8019	B	C	3B
R8020	B	C	3B
R8021	B	C	3B
R8022	B	C	2B
R8023	B	C	2B
R8024	B	C	2B
R8025	B	C	2B
R8026	B	C	2B
R8027	A	C	2C
R8028	B	C	2B
R8030	A	C	3C
R8031	A	C	2C
R8032	A	C	2B
R8033	A	C	2C
R8034	A	C	3C
R8035	A	C	3C
R8036	A	C	3C
OTHER			
X8001	A	C	2B
ZP1	A	C	3B
ZP2	A	C	3B
ZP3	A	C	3B
ZP4	A	C	3B
ZP5	A	C	2B
ZP6	A	C	2B
ZP7	A	C	2B
ZP8	A	C	2B
ZP9	A	C	3B
ZP10	A	C	3B
ZP11	A	C	3B
ZP12	A	C	3B
ZP14	A	C	3B
ZP15	A	C	3A
ZP16	A	C	3B
ZP17	A	C	3B
ZP18	A	C	3B
ZP19	A	C	4B
ZP20	A	C	4B
ZP21	A	C	3B
ZP22	A	C	2B
ZP23	A	C	2B
ZP24	A	C	3B
ZP25	A	C	3B
ZP26	A	C	3B
ZP28	A	C	3C
ZP29	A	C	3A
ZP30	A	C	3A

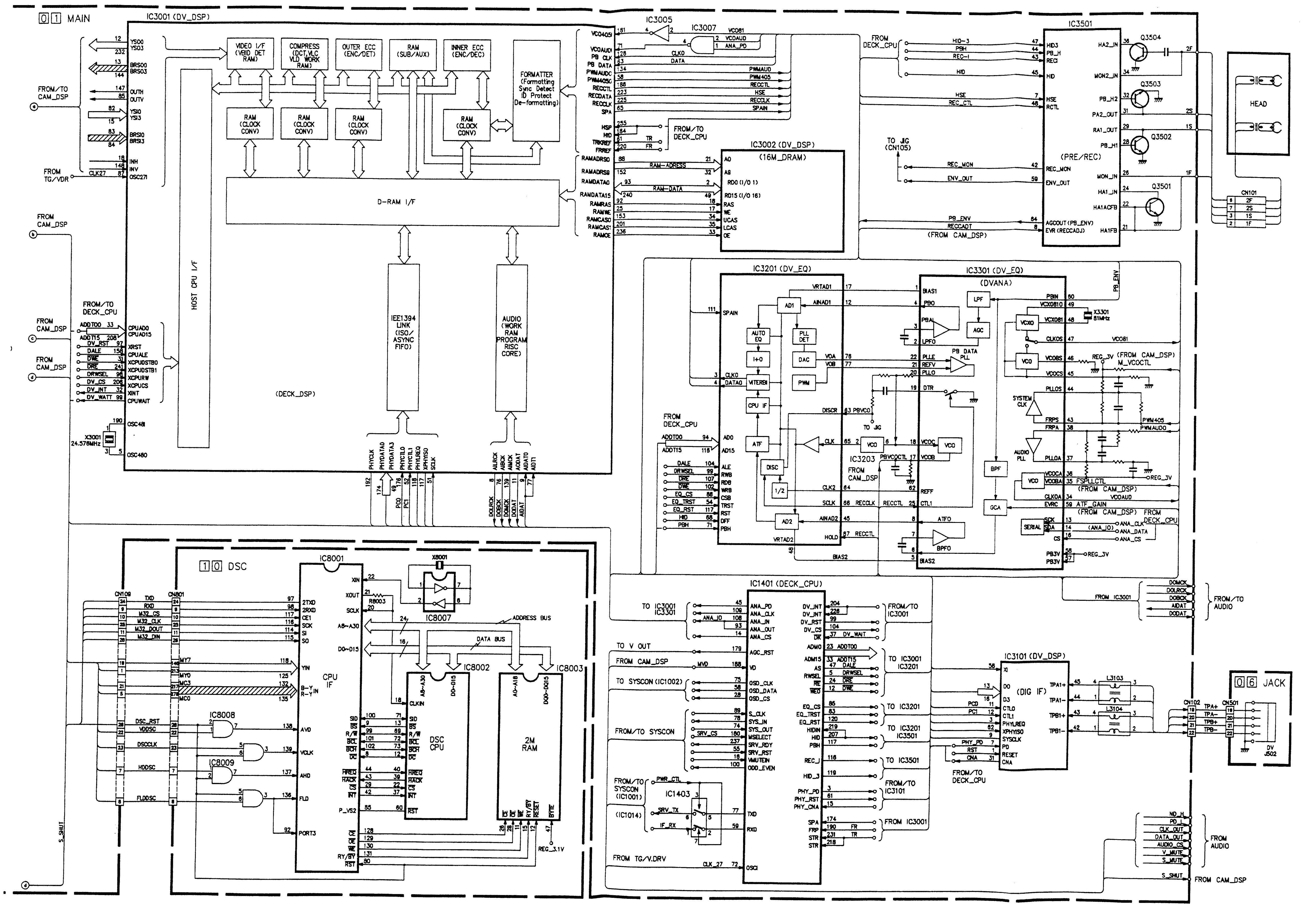
4.29 POWER SYSTEM BLOCK DIAGRAM


07 REAR
LITHIUM J554
BATT TERM J551
CN551
LIT_3V
BATT SW
BATT+
CN103
01 MAIN
REG
Q6201~Q6203 LP UNREG
L6401
F6001 L6001
Q6131 DRUM PWR
Q6141 CAPSTAN PWR
L6002
Q6111 3V REG
IC6001
VCC1
Q6151 2.2V REG
D6152
VCC2
Q6121 4.8V REG
F6003 Q6123 VF REG4.8V
VCC3
D6122
L6114
Q6161 SW REG
Q6163 REG 12V
CNT
Q6167 REG -15V
Q6166 REG -6.5V
F6005
Q6305 SW
Q6301 BATT DC OFF AT PWR OFF
BATT+
PWR_CTL
LP_UNREG
Z_UNREG
DRUM_PWR
CAP_PWR
UNREG
A_3V
REG_2.2V
REG_1.8V
REG_4.8V
VF_REG4.8V
REG_-4.5V
LM_4.8V
REG_12V
REG_-15V
REG_-6.5V
PWR_CTL
SP_UNREG
SW_UNREG
AL_3V
CAMERA DSP
IC4301
IC4303 2.5V REG
IC4302
IC4202 3V REG
IC4201
Q4306 Q4302
TO V_OUT
TG/VDR
IC5501
X5501
CN107
CN5001
04 CCD
CCD_12V
CCD_-6.5V
IC5001
OP BLOCK
IRIS&AF/ZOOM
L4853
FZ_VCC
IC4802~IC4805
L4852 L4851
IC4851
Q4851
CN108
FOCUS VCC
ZOOM VCC
SYSCON
D1001
IC1004
IC1009 3V REG
IC1003 IC1014 IC1015 Q1002
IC1001 BATT SW PWR_CTL BATT_CHR
Q1003 SW
Q1004
RST DET IC1010
IC1002 Q1010
PRE/REC
Q3505 SW
IC3501
V_PS_L
Q3506
MDA
Q1501 SW
IC1601
MDA_3V
CN112
CN113
CAPSTAN MOTOR
05 JUNCTION
CN571
CN573
CN574
DRUM MOTOR
LOADING MOTOR
06 JACK
CN102
CN501
IC501 C502 C502
D501 Q501
AUDIO
Q2401 SW
Q2601~Q2604
IC2201
Q2402
SPK-
SPK+
10 DSC
CN109
CN801
IC8004 REG 3.1V
IC8001~IC8003
IC8008 IC8009
DV DSP
IC3007
IC3001
IC3005
IC3002 IC3101
PC IF
IC1301~IC1303
ZOOM UNIT
CN114
CN104
DC LIGHT
V OUT
IC3701,Q3711 Q3702~Q3704 Q3706,Q3708 Q3709
Q3701
Q3705,Q3707
FROM CAM_DSP REG2.5V
REG-4.5V
DECK CPU
IC1401,IC1402 IC1405 Q1401~Q1403
IC1403
DV EQ
IC3201
IC3202 IC3301
02 MONITOR
DECK OPE
CN101
CN7601
CN7605
SPEAKER
08 B/W VF IF
CN7202
CN7201
CN7203
HLTOR
VEE
VDD
VF_4.8V
BLD
02 MONITOR (B/W VF)
CN7602
IC7101
LCD MODULE
BL
ONLY USE GR-DVL505
VF BL
CN7552
CN7551
RGT
Q7560 SW
Q7562
02 MONITOR
CN7603
ONLY USE GR-DVL805
02 MONITOR
ONLY USE *1 GR-DVL805
BL_4.8V
BL_4.8V/REG_4.8V
Q7617 SW
VGH
L7608
Q7602~Q7606
Q7607 Q7608
Q7609 Q7610
IC7604 IC7605
IC7606 IC7607
Q7615 IC7603
IC7601
CN7604
CN7501
03 LCD BL
L7501
T7501
Q7501
Q7503 SW
Q7502
CN7503
CN7502
VSS
A
B
C
D
E
F
G
H
1
2
3
4
5

4.30 VIDEO SYSTEM BLOCK DIAGRAM

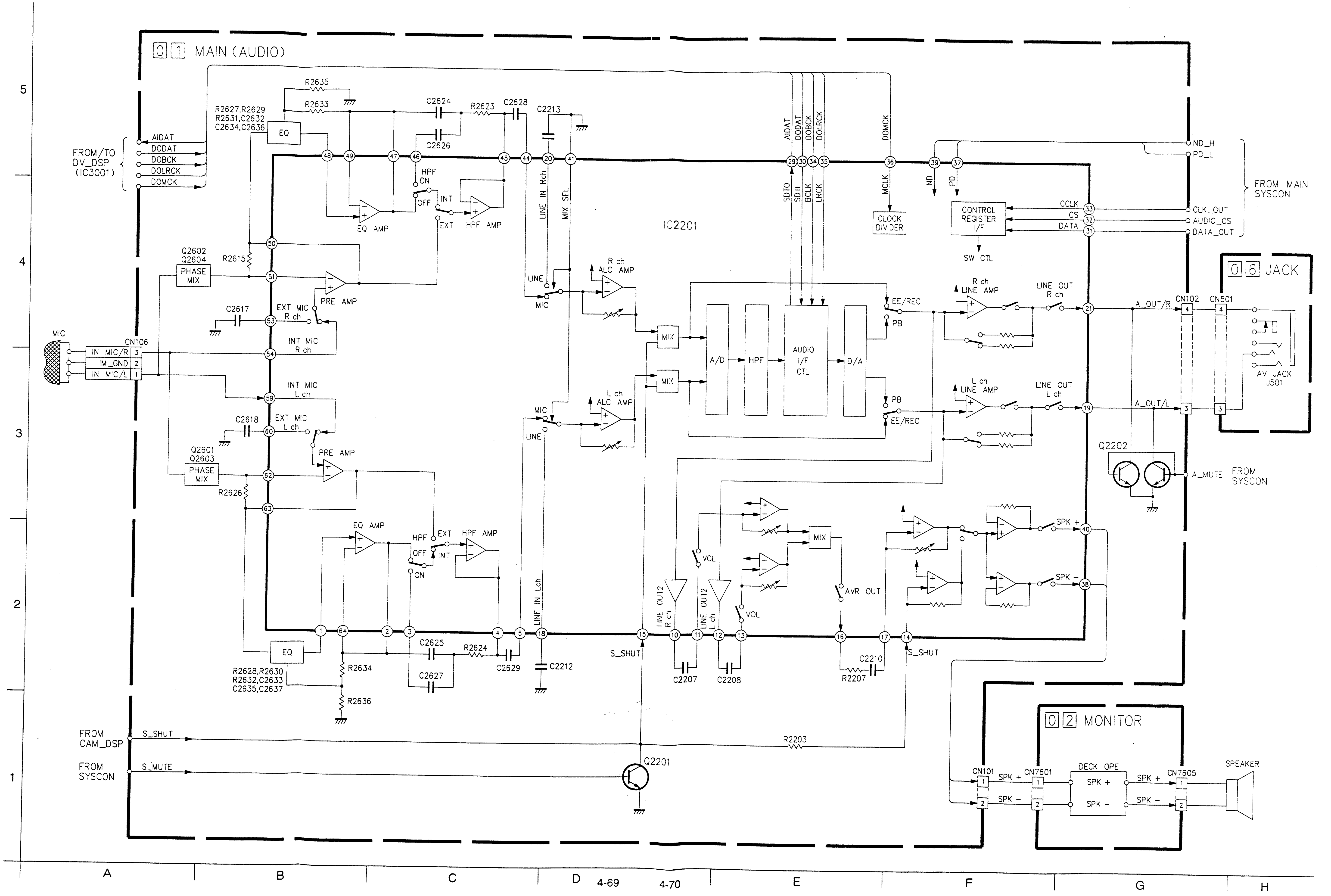


04 CCD
IC5001
(CCD)
Q5001
BUF
OP BLOCK
IRIS CTL
01 MAIN
IC5601 (CDS/AGC/AD)
CAM_AD0~CAM_AD9
IC5501 (TG/V.DRV)
X5501 54MHz CXO
IC1003 (E² PROM)
IC1004 (RTC)
X1002 32KHz
IC1001 (SYSCON CPU)
X1001 24MHz
IC4301 (CAMERA_DSP)
(Y/C)
A/V CONV
V/M APT CTL
Y/C SEPA (3LINE)
PROCESS
RGB SEPA
MATRIX
D/A CONV
MOD
CLAMP
LPF
SUB CARRIER MODULE
DVC IO IF/FIELD MEMORY CONTROL INTERFACE
FROM/TO DV_DSP
TO DSC
TO EQ (DVANA)
(PRE/AMP)
TO AUDIO
IC4302 (FILED MEMORY)
IC4851
BRIDGE DRIVER
PULSE GENERATOR
SERIAL-PARARELLE DECODER
IC4802~IC4805
HALL AMP
MOTOR DRIVE AMP
LPF
IRIS & AF/ZOOM
07 REAR
PC J552
JLIP J553
PC I/F
IC1302
IC1301
IC1303
IC1014
IC1002 (ON SCREEN)
TO CAM_DSP
FROM DECK_CPU
FROM/TO DECK_CPU
FROM CAM_DSP
IC1015
06 JACK
AV JACK J501
S_OUT J503
V OUT
IC3701
DRV
BUF
AMP
02 MONITOR
IC7101 B/W VF
ONLY USE GR-DVL505
08 B/W IF
LCD MODULE
IC7601
IC7603
IC7604
03 LCD BL
VF BL
ONLY USE GR-DVL805
A
B
C
D
E
F
G
H
1
2
3
4
5



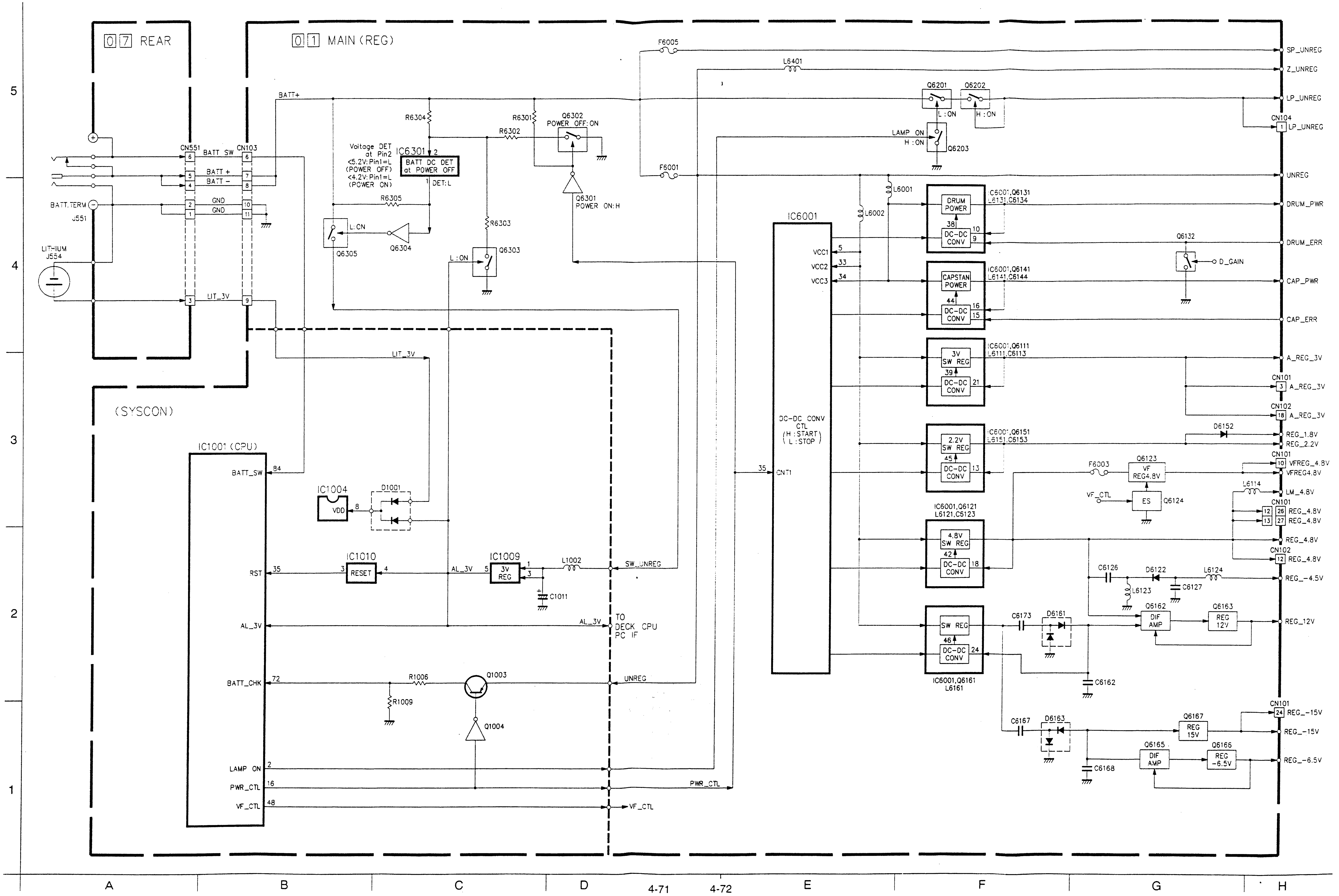
01 MAIN
IC3001 (DV_DSP)
VIDEO I/F (VBID DET RAM)
COMPRESS (DCT,VLC VLD WORK RAM)
OUTER ECC (ENC/DET)
RAM (SUB/AUX)
INNER ECC (ENC/DEC)
FORMATTER (Formatting Sync Detect ID Protect De-formatting)
RAM (CLOCK CONV)
D-RAM I/F
HOST CPU I/F
IEE1394 LINK (ISO/ASYNC FIFO)
AUDIO (WORK RAM PROGRAM RISC CORE)
(DECK_DSP)
FROM/TO CAM_DSP
FROM TG/VDR
FROM CAM_DSP
FROM/TO DECK_CPU
X3001 24.576MHz
IC3005
IC3007
FROM/TO DECK_CPU
IC3002 (DV_DSP)
(16M_DRAM)
RAM-ADRESS
RAM-DATA
IC3501
(PRE/REC)
FROM DECK_CPU
TO JIG (CN105)
(FROM CAM_DSP)
Q3504
Q3503
Q3502
Q3501
HEAD
CN101
IC3201 (DV_EQ)
IC3301 (DV_EQ)
(DVANA)
FROM DECK_CPU
IC3203
FROM CAM_DSP
X3301 51MHz
(FROM CAM_DSP)
FROM DECK_CPU
10 DSC
IC8001
CPU IF
IC8007
X8001
ADDRESS BUS
DATA BUS
IC8002
DSC CPU
IC8003
2M RAM
IC8008
IC8009
CN109
CN801
S_SHUT
IC1401 (DECK_CPU)
TO IC3001 IC3301
TO V OUT
FROM CAM_DSP
TO SYSCON (IC1002)
FROM/TO SYSCON
FROM/TO SYSCON (IC1001)
IC1403
(IC1014)
FROM TG/V.DRV
FROM/TO IC3001
TO IC3001 IC3201
TO IC3201
TO IC3201 IC3501
TO IC3501
FROM/TO IC3101
FROM IC3001
FROM IC3001
FROM/TO AUDIO
IC3101 (DV_DSP)
(DIG IF)
L3103
L3104
CN102
CN501
06 JACK
DV J502
FROM/TO DECK_CPU
FROM AUDIO
FROM CAM_DSP

4.31 AUDIO SYSTEM BLOCK DIAGRAM



01 MAIN (AUDIO)
FROM/TO DV_DSP (IC3001)
AIDAT
DODAT
DOBCK
DOLRCK
DOMCK
R2627,R2629
R2631,C2632
R2634,C2636
EQ
R2635
R2633
C2624
C2626
R2623
C2628
C2213
EQ AMP
HPF
ON
OFF
INT
EXT
HPF AMP
LINE IN Rch
MIX SEL
IC2201
AIDAT
DODAT
DOBCK
DOLRCK
SDTO
SDTI
BCLK
LRCK
DOMCK
MCLK
CLOCK DIVIDER
ND
PD
CONTROL REGISTER I/F
SW CTL
CCLK
CS
DATA
ND_H
PD_L
CLK_OUT
AUDIO_CS
DATA_OUT
FROM MAIN SYSCON
Q2602
Q2604
PHASE MIX
R2615
PRE AMP
C2617
EXT MIC R ch
INT MIC R ch
LINE
MIC
R ch ALC AMP
MIX
A/D
HPF
AUDIO I/F CTL
D/A
EE/REC
PB
R ch LINE AMP
LINE OUT R ch
06 JACK
CN102
CN501
A_OUT/R
A_OUT/L
AV JACK J501
MIC
CN106
IN MIC/R
IM_GND
IN MIC/L
INT MIC L ch
EXT MIC L ch
C2618
Q2601
Q2603
R2626
L ch ALC AMP
L ch LINE AMP
LINE OUT L ch
Q2202
A_MUTE
FROM SYSCON
EQ AMP
HPF AMP
LINE IN Lch
VCL
VOL
LINE OUT2 R ch
LINE OUT2 L ch
MIX
AVR OUT
SPK +
SPK −
S_SHUT
C2625
R2624
C2627
C2629
C2212
C2207
C2208
C2210
R2207
R2628,R2630
R2632,C2633
C2635,C2637
R2634
R2636
FROM CAM_DSP
S_SHUT
FROM SYSCON
S_MUTE
R2203
Q2201
02 MONITOR
CN101
CN7601
DECK OPE
CN7605
SPK +
SPK −
SPEAKER
1
2
3
4
5
A
B
C
D
E
F
G
H

4.32 REGULATOR SYSTEM BLOCK DIAGRAM


07 REAR
01 MAIN (REG)
(SYSCON)
CN551
CN103
BATT SW
BATT +
BATT −
GND
GND
BATT. TERM
J551
LITHIUM
J554
LIT_3V
BATT+
R6304
R6301
Q6302
POWER OFF: ON
R6302
Voltage DET at Pin2
<5.2V: Pin1=L (POWER OFF)
<4.2V: Pin1=L (POWER ON)
IC6301
BATT DC DET at POWER OFF
DET: L
R6305
L: ON
Q6305
Q6304
R6303
Q6303
L: ON
Q6301
POWER ON: H
F6005
L6401
F6001
Q6201
Q6202
L: ON
H: ON
LAMP ON
H: ON
Q6203
L6001
L6002
IC6001
VCC1
VCC2
VCC3
DC-DC CONV CTL
(H: START)
(L: STOP)
CNT1
DRUM POWER
DC-DC CONV
IC6001, Q6131
L6131, C6134
CAPSTAN POWER
IC6001, Q6141
L6141, C6144
3V SW REG
IC6001, Q6111
L6111, C6113
2.2V SW REG
IC6001, Q6151
L6151, C6153
IC6001, Q6121
L6121, C5123
4.8V SW REG
SW REG
IC6001, Q6161
L6161
Q6132
D_GAIN
D6152
F6003
Q6123
VF REG4.8V
VF_CTL
ES
Q6124
L6114
C6126
D6122
L6124
L6123
C6127
C6173
D6161
Q6162
DIF AMP
Q6163
REG 12V
C6162
C6167
D6163
Q6167
REG 15V
C6168
Q6165
DIF AMP
Q6166
REG −6.5V
SP_UNREG
Z_UNREG
LP_UNREG
CN104
LP_UNREG
UNREG
DRUM_PWR
DRUM_ERR
CAP_PWR
CAP_ERR
A_REG_3V
CN101
A_REG_3V
CN102
A_REG_3V
REG_1.8V
REG_2.2V
CN101
VFREG_4.8V
VFREG4.8V
LM_4.8V
CN101
REG_4.8V
REG_4.8V
REG_4.8V
CN102
REG_4.8V
REG_−4.5V
REG_12V
CN101
REG_−15V
REG_−15V
REG_−6.5V
IC1001 (CPU)
BATT_SW
RST
AL_3V
BATT_CHK
LAMP ON
PWR_CTL
VF_CTL
IC1004
VDD
D1001
IC1010
RESET
IC1009
3V REG
L1002
C1011
SW_UNREG
AL_3V
TO DECK CPU PC IF
R1006
Q1003
R1009
Q1004
UNREG
PWR_CTL
VF_CTL
1
2
3
4
5
A
B
C
D
E
F
G
H

4.33 VOLTAGE CHARTS

Note: Parts whose data cannot be obtained (for example, CSP IC, etc.) are omitted from the following chart in some cases.

<SYSCON>

MODE PIN NO.	REC	PLAY
IC1001		
1	0	0
2	0	0
3	0	0
4	0	3
5	2.8	2.8
6	0	0
7	3	3
8	0	0
9	0	0
10	1	1
11	0	0
12	1.9	0
13	0	0
14	1.9	1.8
15	1.1	0
16	3	3
17	1.1	1.1
18	0	0
19	0	0
20	3	3
21	3	3
22	3	3
23	0	0
24	0	0
25	3	3
26	1.9	1.9
27	1.4	1.4
28	0	0
29	3	3
30	0	1.5
31	1.5	1.4
32	0	0
33	1.5	1.5
34	3	3
35	3	3
36	2.9	2.9
37	0	0
38	3	3
39	2.9	2.9
40	0	0
41	0	0
42	0	0
43	3	3
44	3	2.9
45	3	3
46	3	3
47	0	0
48	0	0
49	3	3
50	3	3
51	1.5	0
52	0	0
53	3	3
54	3	3
55	2.9	2.8
56	1.6	0
57	3	3
58	3	3
59	0	0
60	3	0
61	3	3
62	3	3
63	3	0
64	3	3
65	0	0
66	0	0
67	0	0
68	3	3
69	0	0
70	0	0
71	0	0
72	2.4	2.4
73	3	3
74	1.5	1.5
75	1.5	1.5
76	2.8	2.8
77	1.2	2.3
78	0	0
79	0	0
80	0	0
81	3	3
82	1.2	1.3
83	0	0
84	2.1	2.1
85	3	3
86	3	3
87	3	3
88	0	0
89	3	0
90	0	0
91	0	3
92	0	0
93	0	0
94	3	3
95	3	3
96	3	3
97	0	0
98	3	3
99	0	0
100	3	3
101	3	3
102	0	3
103	0	3
104	3	3
105	3	0
106	3	3
107	0	0
108	3	3
109	0	0
110	3	3
111	3	3
112	0	0
113	0	0
114	3	3
115	0	0
116	0	0
117	0	3
118	0	0
119	3	3
120	2.2	3
121	3	3
122	0	3
123	3	0
124	0	0
125	0	0
126	0	0
127	0	3
128	0	0
IC1002		
1	1.7	1.7
2	0	0
3	1.8	1.9
4	3	3
5	3	3
6	3	3
7	1.4	1.4
8	1.5	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	2.9	0
20	2.8	2.8
IC1003		
1	3	3
2	1.8	1.8
3	3	3
4	0	0
5	3	3
6	3	3
7	3	3
8	3	3
IC1004		
1	0	0
2	3	3
3	1.8	1.8
4	0	0
5	3	2.9
6	0.5	0.5
7	0.5	0.4
8	3	3
IC1009		
1	6.6	6.6
2	0	0
3	6.6	6.6
4	0	0
5	3	0
IC1010		
1	0	0
2	0	0
3	3	3
4	3	3
IC1014		
1	3	0
2	3	3
3	3	3
4	3	3
5	3	3
6	3	3
7	0	0
8	2.9	3
9	3	3
10	3	0
11	3	3
12	3	3
13	3	3
14	3	3
IC1015		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q1002		
E	3	3
C	0	0
B	3	3
Q1003		
E	6.6	6.6
C	6.6	6.6
B	0	0
Q1004		
E	0	0
C	0	0
B	3	3
Q1008		
E	0	0
C	0	0
B	0	0
Q1009		
E	0	0
C	0	3
B	3	0
Q1010		
E	3	0
C	0	0
B	0	3

<PC IF>

MODE PIN NO.	REC	PLAY
IC1301		
1	0	3
2	3	3
3	3	3
4	0	0
5	0	0
6	0	0
7	0	0
8	3	3
9	3	3
10	0	3
11	3	3
12	3	3
13	3	3
14	3	3
IC1302		
1	0	0
2	3	3
3	3	3
4	3	3
5	3	3
6	0	0
7	0	0
8	0	0
9	3	3
10	0	0
11	3	3
12	0	0
13	0	0
14	0	0
15	3	3
16	3	3
IC1303		
1	0	0
2	3	3
3	0	0
4	0	0
5	0	0
6	0	3
7	0	0
8	0	0
9	0	0
10	3	3
11	0	0
12	0	0
13	3	3
14	3	3
Q1301		
E	0	0
C	0.4	0.6
B	0	0

<DECK CPU>

MODE PIN NO.	REC	PLAY
IC1402		
1	-	-
2	3	3
3	-	-
4	0	0
5	-	-
6	0	0
7	-	-
8	3	3
IC1403		
1	3	3
2	3	3
3	3	3
4	0	0
5	3	3
6	3	3
7	3	3
8	3	3
IC1405		
1	3	3
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	3	3
8	3	3
Q1401		
E	3	3
C	3	3
B	3	3
Q1402		
1	0	0
2	3	3
3	0	3
4	2.8	0
5	0	0
Q1403		
1	0	0
2	0	0
3	3	3
4	0	-0.4
5	3	3

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.8	0.9
3	0.8	0.8
4	0	0
5	0.8	0.8
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	4.8	4.8
15	0	0
16	0	0.4
17	0	0
18	0.4	0
19	0	0
20	0.4	0
21	0	0
22	0	0
23	0.9	0.9
24	6.6	6.7
25	0	1.5
26	1.5	1.5
27	1.5	1.4
28	1.5	1.5
29	1.4	0
30	1.5	1.5
31	1.5	1.4
32	0	1.4
33	1.5	1.5
34	1.5	0
35	3	3
36	3	3
37	0	0
38	0.6	0.7
39	0.6	0.6
40	1.2	1.2
41	1.6	1.6
42	0	0.4
43	3	0
44	0	0
45	0	0
46	0	0
47	3	3
48	0	0
49	0	3
50	1.9	1.9
51	0	0
52	1.5	1.5
53	1.1	1.1
54	0	0.4
55	0.6	0.7
56	0	0.7
57	1	1
58	0.6	0.6
59	0	0
60	1	1
61	2.6	2.7
62	1.2	1.2
63	1.5	1.5
64	1.5	1.5
65	1.5	1.5
66	1.5	1.5
67	1.5	1.5
68	0.5	0.5
69	0	0
70	0.8	0.9
71	0	0.9
72	0.9	0.9
73	0	0.9
74	1.1	1.1
75	0	0
76	0	0
77	6.7	6.7
78	1.8	1.8
79	0	0
80	0	0
Q1601		
1	0	0
2	0	0
3	4.8	4.8
4	0	0
5	4.8	4.8

<AUDIO>

MODE PIN NO.	REC	PLAY
IC2201		
1	1.9	0
2	1.9	0
3	1.7	3.5
4	1.8	1.9
5	1.5	1.5
6	1.5	1.5
7	1.5	1.5
8	0	0
9	3	3
10	0.6	1.5
11	0.6	1.5
12	0.6	1.5
13	0.6	1.5
14	1.5	1.5
15	1.5	1.5
16	0	1.5
17	1.3	1.5
18	1.5	1.4
19	1.6	0
20	1.4	1.5
21	1.4	1.2
22	2.4	2.4
23	4.8	4.8
24	0	0
25	0	0
26	0	0
27	3	3
28	0	0
29	1.5	0
30	1.5	1.5
31	3	3
32	3	3
33	3	3
34	1.5	1.5
35	1.5	1.5
36	1.5	1.4
37	3	3
38	0	2.6
39	0	0
40	1.5	2.6
41	3	0
42	0	0
43	5.9	5.1
44	1.5	1.5
45	1.8	0.7
46	1.8	3.5
47	1.8	0
48	1.8	0
49	1.9	0
50	1.9	0
51	1.9	0
52	2.5	0
53	1.8	0.5
54	1.8	2.2
55	3.7	4.1
56	1.8	2.1
57	0	0
58	3.7	4.2
59	1.8	2
60	1.8	0
61	1.8	3.5
62	1.8	0
63	1.8	0
64	1.8	0
Q2201		
E	0	0
C	0	0
B	0.6	0
Q2202		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
Q2401		
E	3.7	4.2
C	4.8	4.8
B	4.4	4.8
Q2402		
E	5.9	5.1
C	6.7	6.7
B	6.4	6.3
Q2601		
E	2.4	4.2
C	1.3	0
B	1.9	3.6
Q2602		
E	2.4	4.2
C	1.3	0
B	1.9	3.6
Q2603		
E	1.9	3.6
C	3.7	4.2
B	2.4	4.2
Q2604		
E	1.8	3.6
C	3.7	4.2
B	2.4	4.1

<DV DSP>

MODE PIN NO.	REC	PLAY
IC3002		
1	3	3
2	1.3	1.4
3	1.3	1.4
4	1.3	0
5	1.3	1.2
6	3	3
7	1.3	1.2
8	1.3	1.3
9	1.6	1.6
10	0	1.7
11	0	0
12	-	-
13	-	-
14	-	-
15	0	0
16	0	0
17	2.1	2.2
18	1.2	1.2
19	0	0
20	0	0
21	1.6	0
22	1.5	1.6
23	1.5	1.5
24	1.4	1.4
25	3	3
26	0	0
27	1.3	1.4
28	1.5	1.5
29	1.4	0
30	0	1.4
31	1.4	1.4
32	1.4	1.3
33	2.1	2
34	2	2.4
35	0	2.4
36	0	0
37	-	-
38	-	-
39	-	-
40	0	0
41	1.3	1.3
42	1.2	0
43	1.2	0
44	1.2	1.2
45	0	0
46	1.2	0
47	1.2	0
48	0	0
49	1.5	1.5
50	0	0
IC3005		
1	1	1
2	1	1
3	0	0
4	1	0.9
5	2.1	2.1
IC3007		
1	0	1.8
2	1.7	0.8
3	0	0
4	0	0
5	1.8	1.9
IC3101		
1	0	3
2	3	3
3	0	0
4	2.9	3
5	3	3
6	2.9	3
7	3	0
8	0	0
9	0	1.4
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	2.9	3
20	3	2.9
21	3	3
22	3	3
23	0	0
24	3	3
25	2.9	3
26	0	0
27	2.9	2.9
28	0	0
29	0	0
30	0	0
31	3	3
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	1.8
45	0	1.8
46	0	1.8
47	0	1.8
48	0	1.8
49	0	0
50	0	0
51	2.9	3
52	0	0
53	0	0
54	0	3
55	3	3
56	0	0
57	0	3
58	3	3
59	0	0
60	0	0.6
61	0	0
62	0	0.6
63	0	0
64	0	0

<DV EQ>

MODE PIN NO.	REC	PLAY
IC3201		
1	0	0
2	0	0
3	0	1.3
4	0	1
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0.7
13	0	0
14	0	0
15	0	0
16	0	0
17	0	1.2
18	0	3
19	3	3
20	3	3
21	3	3
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	3	3
32	0	0
33	2.1	2.1
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	1
46	0	0
47	0	0
48	0	1.7
49	3	3
50	0	0
51	3	3
52	0	0
53	0	0
54	3	3
55	3	3
56	0	0
57	3	3
58	2.1	2.1
59	0	0
60	3	3
61	0	0
62	0	0
63	0	1.5
64	2.9	1.2
65	3	1.2
66	1.4	1.4
67	0	0
68	0	1.5
69	0	0
70	0	0
71	0	3
72	0	0
73	2.9	2.9
74	3	3
75	3	0
76	0.8	1.7
77	0.8	1.7
78	0	0

MODE PIN NO.	REC	PLAY
79	0	0
80	3	3
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	3	0
87	3	0
88	0	0
89	0	0
90	0	0
91	3	3
92	0	0
93	2.1	2.1
94	2.7	2.5
95	0	0
96	2.7	2.5
97	0	0
98	0	0
99	2.8	2.9
100	0	0
101	0	0
102	2.9	2.9
103	0	0
104	0	0
105	0	0
106	0	0
107	3	3
108	0	0
109	0	0
110	0	0
111	0	0
112	3	1.5
113	0	0
114	0	0
115	0	0
116	0	0
117	3	3
118	2.1	2.1
119	0	0
120	3	3
IC3202		
1	2.7	1.4
2	0	3
3	0	0
4	3	1.3
5	3	3
IC3301		
1	0	1.2
2	0	1.3
3	0	1.5
4	0	0.7
5	0	1.7
6	1	1
7	0	1.7
8	0	1
9	0	0
10	0	0
11	0	0
12	0	0
13	3	3
14	3	3
15	2.2	1.9
16	3	3
17	0.4	1.2
18	0	1.5
19	0	0
20	0	0
21	0.8	0
22	0.8	1.7
23	3	3
24	3	3
25	2.9	0
26	3	3
27	0	0
28	0	0
29	0	0
30	2.2	0
31	0	0.5
32	2.2	2.3
33	0.6	0.5
34	1.9	1.9
35	1.7	1.5
36	1.7	1.5
37	2.2	1.5
38	0	1.5
39	0	0
40	0	0
41	0	0
42	0	0
43	1.5	1.5
44	1.2	1.2
45	1.1	1.1
46	0	0.7
47	1.2	1.2
48	1.8	1.8
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	1.5	1.5
55	3	3
56	3	3
57	3	2.9
58	3	2.9
59	2.5	0
60	2.4	0
61	0	0
62	2.5	0
63	1.9	2
64	0	0.7

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501		
1	3	0
2	2.5	0
3	3	3
4	0	0
5	0	0
6	0	3
7	2.6	2.3
8	0	0.4
9	0	0
10	0.5	0
11	2.6	0.6
12	0.4	0
13	2.6	2.6
14	3	3
15	0.4	0.6
16	0	0
17	0	0
18	0.4	0
19	4.8	4.8
20	1.1	1.3
21	0.6	0.7
22	2.5	2.1
23	0	0
24	0	1
25	3	2.9
26	3	0
27	0	0
28	0	1.8
29	-0.8	0.5
30	4.6	4.8
31	4.8	0.5
32	-0.5	1.8
33	0	0
34	0	0
35	3	3
36	1.9	1.1
37	0	0
38	2.5	2.1
39	0.7	0.8
40	1.3	1.3
41	0	0
42	0	0
43	3	0
44	0	3
45	1.5	1.5
46	3	3
47	0	3
48	2.9	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0.5	2.2
56	0	0
57	2.6	1.1
58	3	2.2
59	3	1.9
60	3	3
61	2.5	1.8
62	3	2.4
63	0	0
64	1.6	1
Q3501		
E	0	0
C	0	0
B	0.5	0.7
Q3502		
E	0	0
C	0	0
B	-1.3	0.7
Q3503		
E	0	0
C	0	0
B	-1.1	0.7
Q3504		
E	0	0
C	1.7	1
B	0.7	0.7
Q3505		
E	4.8	4.8
C	4.8	0.5
B	4.1	4.8
Q3506		
E	0	0
C	0	4.8
B	3	0

<V OUT>

MODE PIN NO.	REC	PLAY
IC3701		
1	2.2	2.2
2	2.4	2.4
3	4.8	4.8
4	0	1.8
5	0	0
6	4.8	4.8
Q3701		
1	0.6	0.6
2	1.2	1.2
3	2.8	2.8
4	0.5	0.6
5	1.2	1.2
6	0	0
Q3702		
E	2.2	2.2
C	4.7	4.7
B	2.7	2.8
Q3703		
E	3.2	3.2
C	0	0
B	2.6	2.6
Q3704		
1	-0.6	-0.6
2	0	0
3	4.8	4.8
4	0	0
5	0	0.6
6	0	4.8
Q3705		
1	0.6	0.6
2	0	0
3	-4.6	-4.6
4	0	0
5	-0.6	-0.6
6	-4.6	-4.6
Q3706		
1	0	0
2	0	0
3	4.8	4.8
4	0	0
5	0.6	0.6
6	4.8	0
Q3707		
1	0.6	0.6
2	0	0
3	-4.6	-4.6
4	0	0
5	-0.6	-0.6
6	0	-4.6
Q3708		
E	0.6	0
C	0	3.7
B	1.2	1.2
Q3709		
E	3.1	3.1
C	4.7	4.8
B	3.7	3.7
Q3710		
E	0	0
C	4.4	4.3
B	0	0
Q3711		
E	4.8	4.8
C	0	0
B	4.4	4.4

<CAMERA DSP>

MODE PIN NO.	REC	PLAY
IC4201		
1	0	0
2	1.5	3
3	1.5	3
4	1.5	0
5	1.4	0
6	1.5	0
7	1.6	3
8	1.4	0
9	1.7	0
10	0.6	0
11	0	0
12	0	0
13	0	0
14	0	0
15	3	3
16	1.3	0
17	2.9	0
18	2.4	0
19	2.4	0
20	0	0
21	0	3
22	0	0
23	1.7	1.4
24	1.5	0
25	0	0
26	3	3
27	1.5	1.5
28	0	0
29	0	0
30	0	0
31	3	3
32	1.1	1.2
33	1.5	1
34	1.9	0.7
35	1.2	0
36	0	0
37	0	0
38	3	3
39	0	0
40	0	0
41	3	3
42	0	0
43	3	3
44	3	3
45	2.9	2.9
46	3	3
47	0	0
48	0	0
IC4202		
1	4.8	0
2	0	0
3	1.2	0
4	3	3
5	4.8	4.8
IC4302		
1	0	0
2	1.3	1.1
3	1.4	1.1
4	1.3	1.4
5	1.3	1.3
6	1.3	1.2
7	1.4	1.2
8	1.3	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	2.6	2.6
14	3	3
15	1.7	1.6
16	1.3	1.3
17	3	3
18	1.6	1.6
19	1.2	0
20	0	0
21	1.6	0
22	1.3	1.1
23	3	3

MODE PIN NO.	REC	PLAY
24	1.6	1.5
25	1.6	1.5
26	0	0
27	1.5	1.9
28	1.5	1.1
29	3	3
30	2.3	2.1
31	0	0.6
32	3	2.9
33	0	0
34	2.7	2.7
35	0	0
36	0	0
37	0	0
38	1.3	1.5
39	0.6	0.5
40	2	0
41	-	1
42	0	1.9
43	1.4	0
44	1.3	1.1
IC4303		
1	3	3
2	0	0
3	1.2	1.2
4	2.5	2.5
5	2.9	3
Q4302		
1	0.8	0
2	0.8	0.8
3	0	0
4	0	0
5	0	0
6	0	0
Q4306		
E	1.1	1.1
C	0	0
B	0	0.4

<IRIS & AF/ZOOM>

MODE PIN NO.	REC	PLAY
IC4802		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC4803		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC4804		
1	2.1	3.6
2	2.1	2.2
3	2.2	2.2
4	0	0
5	-	-
6	-	-
7	-	-
8	-	-
IC4805		
1	0	0
2	1.3	2.6
3	1.3	0
4	0	0
5	2	1.9
6	2	1.9
7	2	1.9
8	4.8	0
IC4851		
1	0	0
2	0.5	0.5
3	0	0
4	0	0
5	0	0.4
6	0	0
7	0	0
8	3	3
9	6.6	6.6
10	0.4	1.2
11	0	0
12	0.4	1.3
13	6.6	6.6
14	0.4	1.3
15	0	0
16	0.4	1.3
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	6.6	6.6
24	0	0
25	0	0
26	0	0
27	6.6	6.6
28	0	0
29	0	0
30	-	0
31	3	3
32	0	0
33	0	0
34	3	3
35	3	3
36	1.5	1.5
37	1.5	1.4
38	3	3
Q4803		
E	0.4	0.4
C	1.8	1.8
B	1	1
Q4851		
E	0	0
C	3.5	3.5
B	0	0

<TG/VDR>

MODE PIN NO.	REC	PLAY
IC5501		
1	1.2	1.2
2	2.4	0
3	2.9	0
4	3	3
5	0	0
6	3	3
7	0	0
8	0.6	0
9	0	0
10	2.9	3
11	1.4	0
12	2.9	2.9
13	0	0
14	1.2	0
15	0	0
16	2.9	3
17	2.4	0
18	2.4	0
19	2.4	0
20	0	0
21	0	0
22	2.9	3
23	0	0
24	3	3
25	3	0
26	0	3
27	0	0
28	1.2	1.8
29	0	0
30	1.3	1.6
31	0	0
32	0	0
33	3	3
34	1.5	0
35	1.3	0
36	2.9	3
37	2.9	0
38	3	3
39	0	0
40	0	0
41	-6.2	0
42	0	12.1
43	12.1	12.2
44	-6.2	12.1
45	-6.3	12.1
46	-6.6	-6.7
47	0	0
48	2.9	0

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	2.2	2.2
2	1.2	1.2
3	2.2	2.2
4	0	0
5	6.6	6.7
6	0	1
7	1.3	1.3
8	2.2	0
9	0	0
10	0	0
11	0.7	0.7
12	1	1
13	1	1
14	0.7	0
15	0	0
16	0	0
17	0	0.6
18	1	1
19	1.2	1.2
20	0.9	1
21	1	1
22	1	0.9
23	1	1
24	1	1
25	0.9	1
26	0.9	0
27	0	0
28	1	1
29	0	0
30	2.4	2.4
31	0.7	0.8
32	0.8	0.8
33	6.6	6.7
34	6.7	6.7
35	2.9	3
36	3	3
37	0	0
38	4.7	4.7
39	3.4	3.4
40	2.8	2.8
41	0	0
42	1.6	1.7
43	1	1.1
44	5.6	5.7
45	4.4	4.4
46	2.7	2.7
47	0	0
48	2.2	2.2
IC6301		
1	6.6	6.6
2	6.4	6.4
3	0	0
4	0	0
Q6111		
G	3.4	3.4
D	3	3.1
S	6.6	6.6
Q6121		
G	1.6	1.6
D	4.9	4.9
S	6.6	6.6
Q6123		
E	4.8	4.8
C	0	0
B	4.8	4.8
Q6124		
E	0	0
C	4.8	4.8
B	0	0
Q6131		
G	4.7	4.7
D	1.8	1.8
S	6.6	6.6
Q6132		
E	0	0
C	0	0
B	3	3
Q6141		
G	5.6	5.7
D	0.9	1
S	6.6	6.7
Q6151		
G	4.4	4.4
D	0	2.1
S	0.6	6.6
Q6161		
G	2.7	2.7
D	0	0
S	6.6	6.6
Q6162		
1	4.3	4.3
2	4.8	4.8
3	14.8	14.8
4	4.3	4.3
5	4.8	4.8
6	15.4	15.4
Q6163		
E	15.4	15.4
C	12.1	12.1
B	14.8	14.8
Q6165		
1	-6.1	-6.2
2	6.6	-6.7
3	-13	0
4	-6.1	-6.2
5	-6.6	-6.7
6	-15.5	-15.5
Q6166		
E	-13.6	-15.5
C	0	-6.7
B	13	-15.2
Q6167		
E	-14.8	-14.8
C	-15.5	-15.5
B	-15.5	-15.4
Q6168		
E	0	0
C	15.4	15.4
B	-0.8	-0.8
Q6201		
E	6.7	6.7
C	6.6	0
B	6	6.7
Q6202		
E	5.3	0
C	6.7	6.7
B	5.6	0
Q6203		
E	0	0
C	0	6.6
B	0.6	0
Q6301		
E	0	0
C	0	0
B	3	3
Q6302		
G	0	0
D	6.3	6.4
S	0	0
Q6303		
G	3	3
D	0	0
S	3.8	3.8
Q6304		
G	6.6	6.6
D	0	0
S	0	0
Q6305		
G	0	0
D	6.6	6.7
S	6.6	6.7

<LCD BL>

MODE PIN NO.	REC	PLAY
IC751		
1	4.7	4.7
2	113.9	0
3	0	0
4	24	2.7
5	23.9	2.7
6	1.6	0
7	1.6	0
8	0	0
9	3	0
10	3	3
Q7501		
E	0	0
C	4.6	4.6
B	0	0
Q7502		
E	0	0
C	4.6	4.6
B	0	0
Q7503		
E	4.7	4.7
C	4.6	4.6
B	0	0
Q7504		
E	0	0
C	0	0
B	0.6	0.7
Q7505		
E	0	0
C	0	0
B	0	0
Q7506		
E	0	0
C	0.7	0.6
B	0	0

<JACK>

MODE PIN NO.	REC	PLAY
IC501		
1	1.9	1.9
2	1.9	1.9
3	0	2
4	0	0
5	1.9	0
6	0	0
7	1.3	0
8	0	4.8
IC502		
1	2.9	2.9
2	0	0
3	4.7	4.7
Q501		
E	0	0
C	0	0
B	2.7	0
Q502		
E	0	0
C	4.3	4.3
B	-	-

<B/W VF>

MODE PIN NO.	EE
IC7101	
1	4.8
2	0
3	0
4	0
5	1
6	6.3
7	2.4
8	0.6
9	1.4
10	0
11	0
12	0
13	4.8
14	7.8
15	4.8
16	0
17	2.4
18	6
19	2
20	9.4
21	0
22	2.6
23	0
24	2.4
25	2.9
26	2.9
27	3.5
28	0
29	11.3
30	2.5
31	0
32	0.4
33	1.2
34	0
35	0
36	0.7
37	0.6
38	0
39	1.3
40	11.5
41	0
42	0
43	4.8
44	4.8
45	2.4
46	0.9
47	0
48	0

<MONITOR>

MODE PIN NO.	EE
IC7601	
1	2.4
2	0
3	2.8
4	2.7
5	3.4
6	4.8
7	2
8	3.3
9	3.4
10	0
11	6.1
12	6.2
13	12.1
14	6.2
15	6.2
16	6.3
17	6.2
18	6.3
19	0
20	0
21	0
22	0
23	2.9
24	2.7
25	0
26	0
27	0
28	0
29	0
30	0.9
31	0.9
32	0.8
33	3
34	0
35	0
36	2.6
37	0.4
38	0
39	0
40	0
41	0
42	0
43	1.5
44	1.7
45	2.5
46	0
47	0
48	2.5
49	0
50	3
51	0
52	3.5
53	0
54	3
55	3
56	2.7
57	0
58	0
59	0
60	2.5
61	2.7
62	2.7
63	0
64	0
IC7603	
1	3
2	0
3	3
4	0
5	3
6	3
7	3
8	3
IC7604	
1	6
2	6.2
3	6
4	6.2
5	6.2
6	0
7	0
8	0
9	0
10	0
11	0
12	6.2
13	5.8
14	6.2
15	6.2
16	12.1
IC7605	
1	0
2	0
3	-4.7
4	0
5	0
6	4.7
7	0
8	12.1
IC7606	
1	0
2	0
3	0
4	3
5	3
IC7607	
1	1.5
2	3
3	0
4	1.4
5	3
Q7602	
E	0
C	0
B	3
Q7603	
E	4.8
C	4.7
B	0
Q7604	
E	4.8
C	2.4
B	4.8
Q7605	
E	4.7
C	2.4
B	4.7
Q7606	
E	4.8
C	2.4
B	4.7
Q7607	
E	-8.9
C	0
B	-8.4
Q7608	
E	-8.6
C	-14.4
B	-8.9
Q7609	
E	0.8
C	12.1
B	1.3
Q7610	
E	1.1
C	-12.9
B	0.8
Q7615	
E	3
C	-13
B	3
Q7616	
E	0
C	0
B	2.9
Q7617	
E	4.7
C	4.7
B	0
Q7618	
E	0
C	0
B	2.9
Q7619	
1	5.5
2	6
3	0
4	6
5	5.5
6	12.1

<CCD>

MODE PIN NO.	EE
IC5001	
1	-6.2
2	-6.2
3	0
4	0
5	0
6	0
7	12.1
8	9.3
9	0
10	10.4
11	1.4
12	1.2
13	7.2
14	0
Q5001	
E	8.6
C	12.1
B	9.3

<B/W VFIF>

MODE PIN NO.	EE
Q7201	
E	0.8
C	1.7
B	1.5

<DSC>

MODE PIN NO.	EE	PB
IC8001		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
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IC8002		
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100	-	-
IC8003		
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IC8004		
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IC8007		
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6	-	-
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8	-	-
IC8008		
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2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
IC8009		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
Q8001		
E	-	-
C	-	-
B	-	-
Q8002		
E	-	-
C	-	-
B	-	-

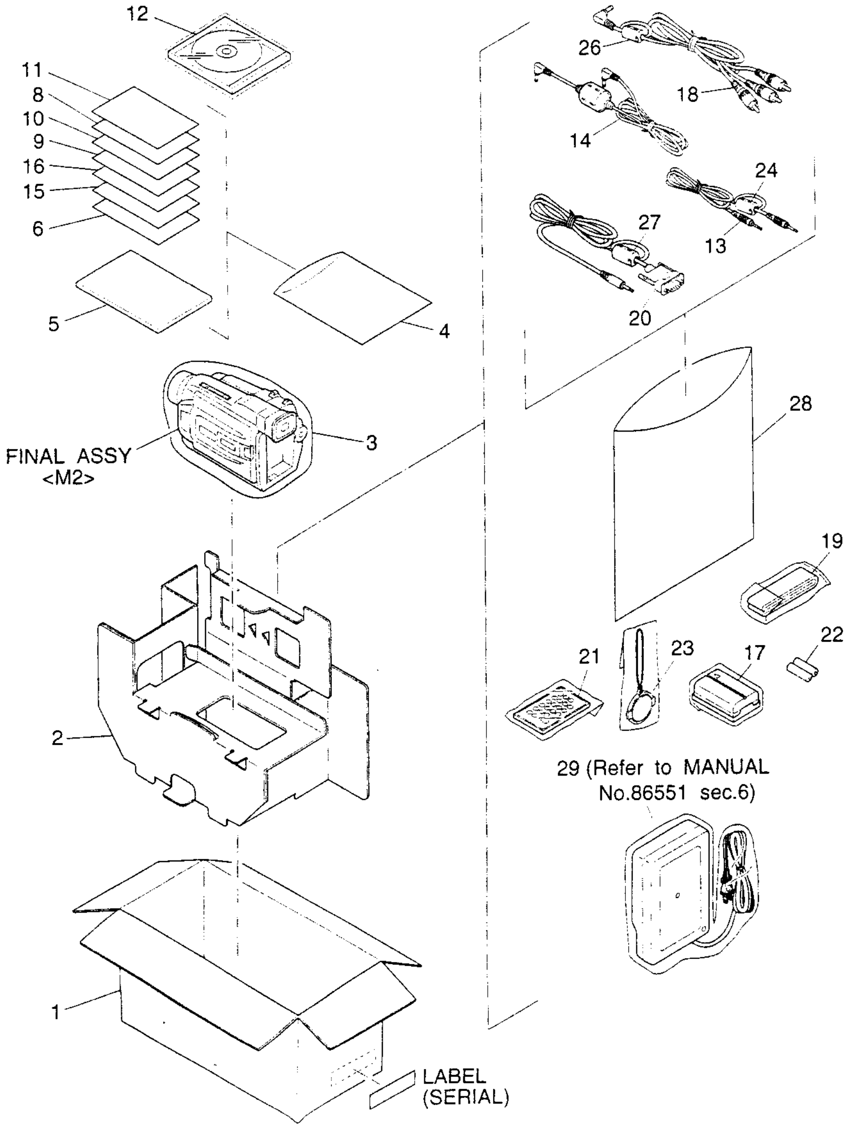
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



* *

PACKING ASSEMBLY <M1>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	1	LY31631-007B	PACKING CASE,505U
		LY31631-008B	PACKING CASE,805U
	2	LY31632-001A	CUSHION
	3	LY30023-015A	POLY BAG
	4	QPA02003006	POLY BAG
⚠	5	LYT0575-001A	IB(EN)
⚠		LYT0575-002A	IB(FR)
⚠	6	LYT0576-001A	IB(SOFT.SETUP)
	8	LYT0378-003A	SHEET(AGREMENT)
	9	YU10350	Q.CARD(JCA)
	10	BT-51005-4	WARRANTY INF.
	11	BT-51020-2	REGIST.CARD
	12	LY31133-011A	CD ROM ASSY
	13	QAM0214-001	RM CABLE,EDITING CABLE
	14	QAM0170-001	DC CORD
⚠	15	LYT0576-002A	IB(CAPTURE.EN)
⚠	16	LYT0576-003A	IB(PICNAVI.EN)
⚠	17	LY31587-001A	BATTERY PACK. BN-V408U
	18	QAM0211-001	CABLE ASSY,AUDIO/VIDEO CABLE
	19	LY20186-001A	SHOULDER STRAP
	20	QAM0084-001	PC CONNECTION CABLE
	21	LY20543-002A	REMOTE CONTROL UNIT
	22	-	BATTERY,AAA(R03),X2
	23	LY42182-001A	LENS CAP
	24	QQR0491-002	CORE FILTER
	26	QQR0918-002	CORE FILTER
	27	QQR0491-002	CORE FILTER
	28	QPGA017-03005	POLY BAG
⚠	29	LY20591-001B	AC POWER ADAPTER CHARGER,AA-V40U

- **INSTRUCTIONS**
  EN .... ENGLISH
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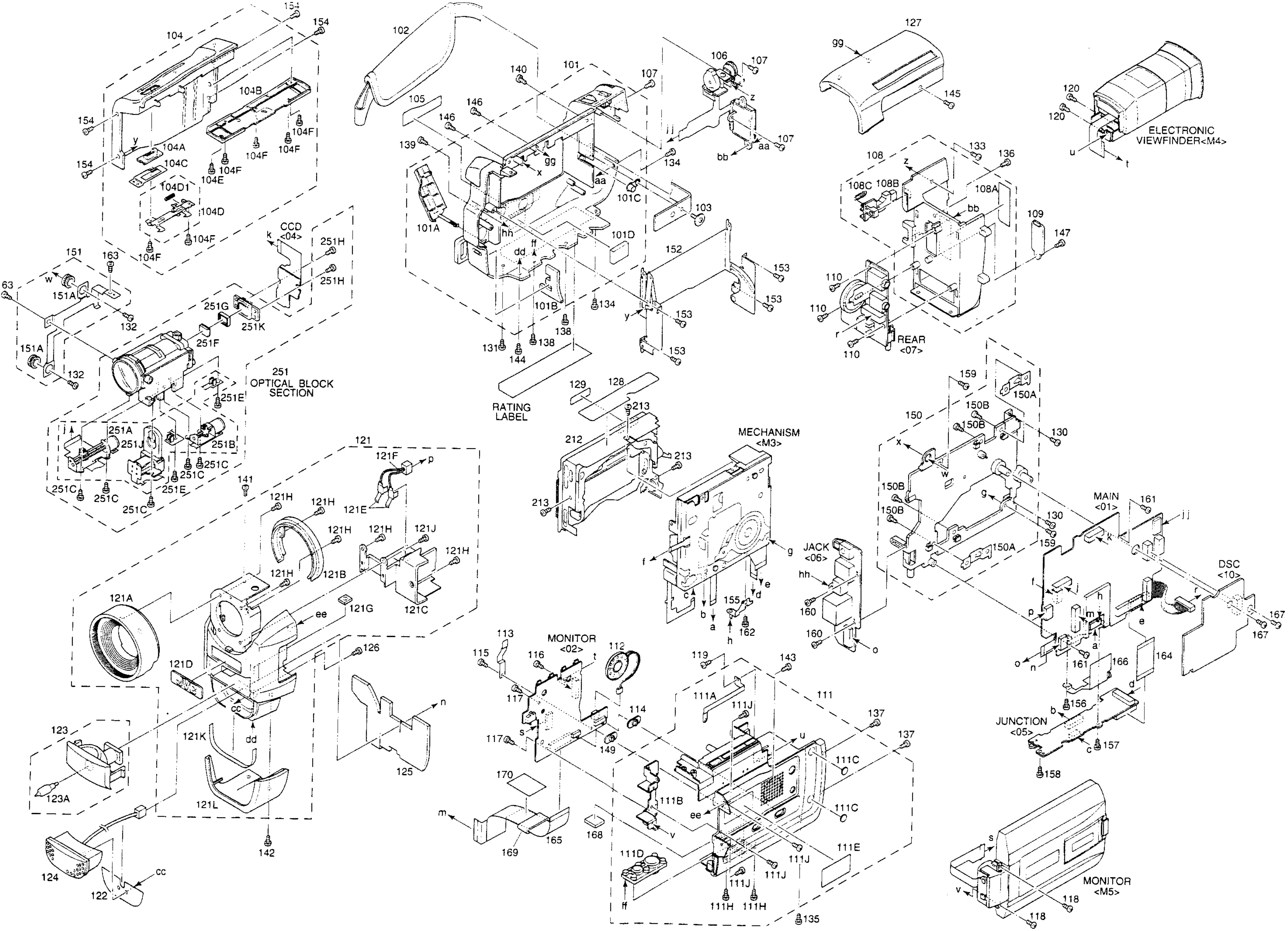
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FINAL ASSEMBLY <M2>

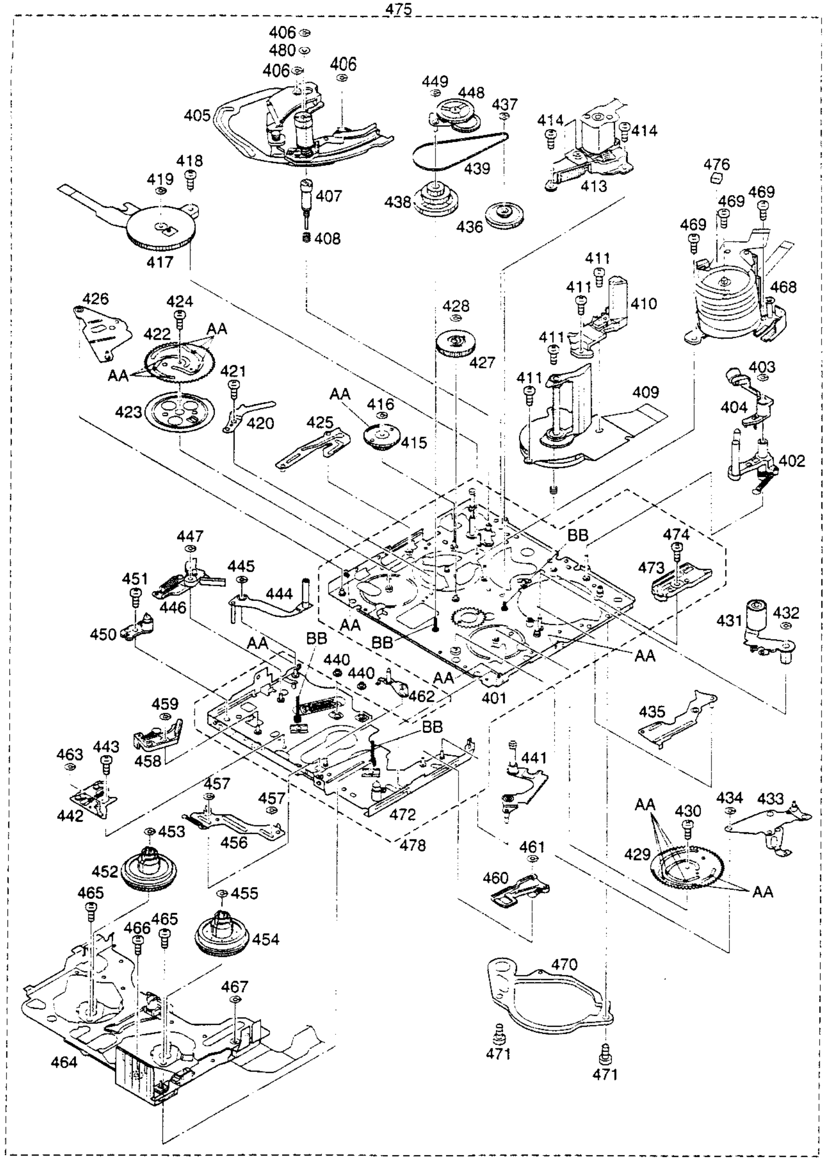
# △ REF No.	PART No.	PART NAME, DESCRIPTION
△ 101	LY20560-001B	LOWER CASE ASSY
101A	LY31607-001A	JACK COVER
101B	LY42391-001A	SHEET(MIC)2
101C	LY40592-001A	CAP(GRIP BELT)
101D	LY30029-052A	SPACER(A)
102	LY20575-001B	GRIP BELT
103	LY30018-003A	SPECIAL SCREW
104	LY31609-001A	CASS.COVER ASSY
104A	LY31610-001A	KNOB(EJECT)
104B	LY31611-001A	COVER(C.C)
104C	LY42173-001A	BKT(E.KNOB)
104D	LY42174-001A	LOCK ASSY
104D1	LY30002-038A	COMPRES. SPRING
104E	LY30018-084A	SPECIAL SCREW
104F	LY30018-023A	SPECIAL SCREW,X6
105	LY42177-001B	SHEET(M.ADJ)
106	LY20542-001A	ZOOM UNIT
107	LY30018-084A	SPECIAL SCREW,X3
108	LY31596-001A	REAR COVER ASSY
108A	LY42161-001A	SHEET(REAR)
108B	LY31595-001A	KNOB(RELEASE)
108C	LY30001-018A	TENSION SPRING
109	LY41691-001A	COVER(JIG)
110	LY30018-084A	SPECIAL SCREW,X3
111	LY20550-002A	UPPER CASE(3)ASSY
111A	LY31599-001A	SHEET(EARTH)
111B	LY31623-001A	BRACKET
111C	LY40664-002A	SPACER,X2
111D	LY31019-001A	BASE
111E	LY42244-001A	SHEET(MARK)
111H	LY30018-084A	SPECIAL SCREW,X2
111J	LY30018-0A8A	SPECIAL SCREW,X4
112	QAS0048-001	SPEAKER
113	LY42167-001A	PLATE(SPK)
114	LY42168-001A	KNOB(SLIDE)
115	LY30018-023A	SPECIAL SCREW
116	LY30018-0A5A	SPECIAL SCREW
117	LY30018-0A8A	SPECIAL SCREW,X2
118	LY30018-090A	SPECIAL SCREW,X2
119	LY30018-038A	SPECIAL SCREW
120	LY30018-084A	SPECIAL SCREW,X2
121	LY20563-001B	FRONT COVER ASSY
121A	LY31615-001B	HOOD
121B	LY31616-001A	RING
121C	LY20572-001A	HOLDER(L.CONT.)
121D	LY40987-003B	MARK
121E	YQ43810-1-1	CONTACT(LIGHT),X2
121F	WJM0003-006A	E-SI C WIRE C-F
121G	YQ44434	BRACKET
121H	LY30018-0A7A	SPECIAL SCREW,X6
121J	LY30018-079A	SPECIAL SCREW
121K	LY30029-042A	SPACER(A)
121L	LY31614-001A	COVER (BOTTOM)
122	LY42184-001A	PLATE(MIC)
123	LY31617-001A	DC LIGHT ASSY
123A	YQ44266	LAMP
124	LY30861-012A	MICROPHONE
125	LY42390-001A	SHEET(MIC)1
126	QYSLSF2055D	SPECIAL SCREW
127	LY20552-006A	TOP COVER(3),505U
	LY20552-010A	TOP COVER(3),805U
128	LY40698-002A	LABEL(HOUSING)
129	LY40699-002A	LABEL(PUSH)
130	LY30018-079A	SPECIAL SCREW,X2
131	LY30018-084A	SPECIAL SCREW
132	LY30018-050A	SPECIAL SCREW,X2
133	LY30018-079A	SPECIAL SCREW
134	LY30018-079A	SPECIAL SCREW,X2
135	LY30018-079A	SPECIAL SCREW
136	LY30018-084A	SPECIAL SCREW
137	LY30018-023A	SPECIAL SCREW,X2
138	LY30018-084A	SPECIAL SCREW,X2
139	LY30018-096A	SPECIAL SCREW
140	LY30018-066A	SPECIAL SCREW
141	LY30018-084A	SPECIAL SCREW
142	LY30018-079A	SPECIAL SCREW
143	LY30018-059A	SPECIAL SCREW
144	LY30018-044A	SPECIAL SCREW
145	LY30018-059A	SPECIAL SCREW
146	LY30018-052A	SPECIAL SCREW,X2
147	LY30018-037A	SPECIAL SCREW
149	LY42168-002A	KNOB(SLIDE)
150	LY31618-001B	HOLDER(MECHA)ASSY
150A	LY42178-001A	BKT(MECHA),X2
150B	LY30018-056A	SPECIAL SCREW,X4
151	LY42179-001A	BKT(OP)ASSY
151A	LY41675-001A	RUBBER,X2
152	LY31612-001A	ARM ASSY
153	LY30018-084A	SPECIAL SCREW,X4
154	LY30018-066A	SPECIAL SCREW,X4
155	LY40709-001C	BRACKET(GRD)
156	YQ43893-3	MINI SCREW
157	YQ43893-3	MINI SCREW
158	LY30018-023A	SPECIAL SCREW
159	LY30019-021A	SPECIAL SCREW,X2
160	LY30018-023A	SPECIAL SCREW,X2
161	LY30018-023A	SPECIAL SCREW,X2
162	YQ43893-4	MINI SCREW
163	LY30018-024A	SPECIAL SCREW,X2
164	WJT0028-001A	FFC WIRE,MAIN CN113-JUNC CN571
165	WJT0029-003A	FFC WIRE,MAIN CN101-MONI CN7601
166	LY31657-001A	SHIELD CASE(2)
167	LY30018-050A	SPECIAL SCREW,X2
168	LY30029-057A	SPACER(A)
169	QQR0717-001	FERRITE CORE
170	LY30029-058A	SPACER(A)
212	LY30483-001Q	CASSETTE HOUSING ASSY
213	YQ43893-4	MINI SCREW,X3

– OPTICAL BLOCK SECTION –

# △ REF No.	PART No.	PART NAME, DESCRIPTION
251	YS20973F	OPTICAL BLOCK ASSY
251A	LY30723-001B	ZOOM MOTOR
251B	LY30724-001B	FOCUS MOTOR
251C	LY30727-002A	SCREW,X5
251E	LY30727-001A	SCREW,X2
251F	LY41718-001A	OPTICAL LPF
251G	LY31639-001A	SPACER RUBBER
251H	QYSPSGU1750Z	SCREW,X2
251J	LY31726-001A	IRIS MOTOR
251K	YS40168E	CCD BASE ASSY

5.3 MECHANISM ASSEMBLY <M3>

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.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Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

NOTE: The section marked in AA and BB, indicate lubrication and greasing areas.

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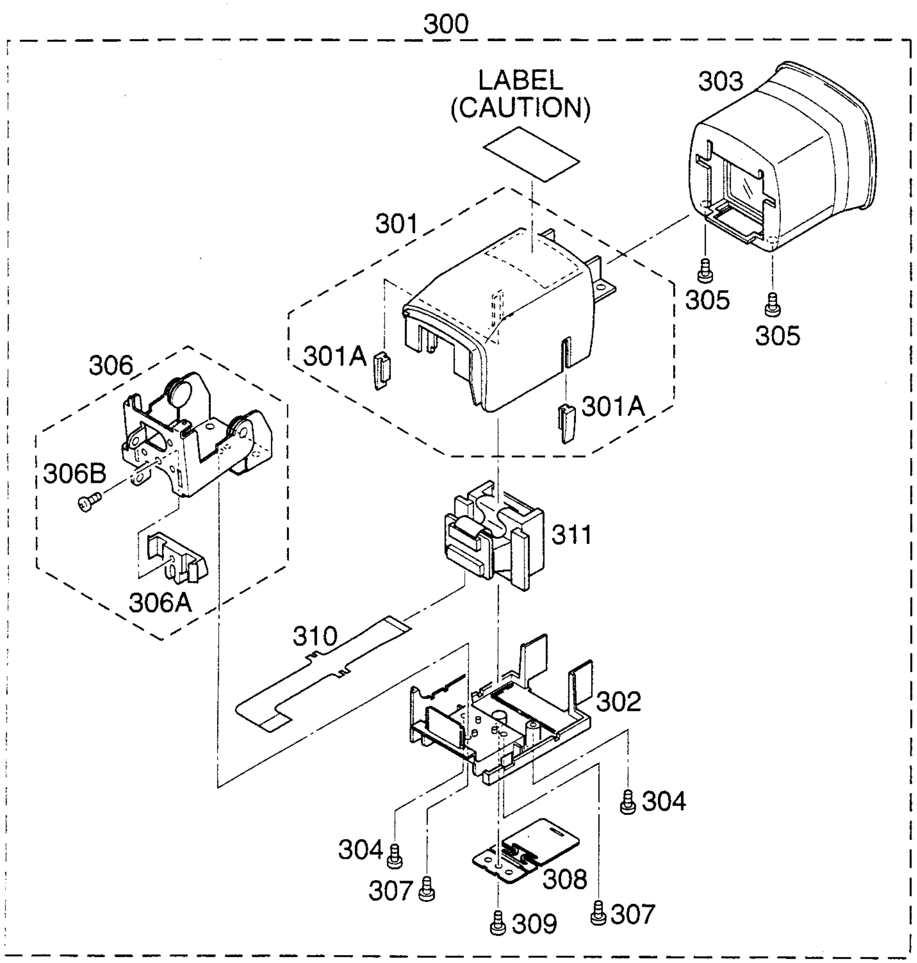
MECHANISM ASSEMBLY <M3>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
401	LY10077-001L	MAIN DECK ASSY
402	LY30436-001F	SLANT P.ARM ASSY
403	YQ44246	SLIT WASHER
404	LY30438-001B	CLEANER ARM ASSY
405	LY10080-001V	RAIL ASSY
406	YQ44246	SLIT WASHER,X3
407	LY40353-001D	GUIDE ROLLER(S)ASSY
408	LY30002-006C	COMPRES. SPRING
409	QAR0026-001	CAPSTAN MOTOR
410	LY30504-001C	CATCHER(T)ASSY
411	YQ43893	MINI SCREW,X4
413	LY30448-001E	MOTOR BKT ASSY
414	YQ43893	MINI SCREW,X2
415	LY30449-001C	WORM WHEEL
416	YQ44246	SLIT WASHER
417	LY40496-001C	ROTARY ENCODER
418	YQ43893	MINI SCREW
419	YQ44246	SLIT WASHER
420	LY40614-001B	GEAR HOLDER
421	YQ43893-6	MINI SCREW
422	LY30450-001C	MAIN CAM
423	LY30840-001A	BRAKE CTL PLATE
424	YQ43893	MINI SCREW
425	LY40373-001C	TC LEVER ASSY
426	LY30452-001E	SLIDE LEVER ASSY
427	LY30454-001A	CONNECT GEAR
428	YQ44246	SLIT WASHER
429	LY30455-001B	SUB CAM
430	YQ43893	MINI SCREW
431	LY30456-001F	PINCHROLLER ARM ASSY
432	YQ44246	SLIT WASHER
433	LY30459-001A	CHARGE ARM ASSY
434	YQ44246	SLIT WASHER
435	LY40387-001B	BC LEVER ASSY
436	LY40389-001D	R.D.PULLEY ASSY
437	YQ44246-2	SLIT WASHER
438	LY40391-001G	CENTER GEAR ASSY
439	LY40396-001A	TIMING BELT
440	LY40413-001A	COLLAR,X2
441	LY30468-001E	GUIDE ARM ASSY
442	LY30618-001C	SLIDE GUIDE PLATE ASSY
443	YQ43893-2	MINI SCREW
444	LY40420-001J	TENSION ARM ASSY
445	YQ44246	SLIT WASHER
446	LY30471-001D	PAD ARM ASSY
447	YQ44246	SLIT WASHER
448	LY40432-001H	IDLER ARM ASSY
449	YQ44246-2	SLIT WASHER
450	LY30476-001A	GUIDE PIN(S)
451	YQ43893	MINI SCREW
452	LY40441-001B	REEL DISK(SUPPLY)ASSY
453	YQ44246	SLIT WASHER
454	LY40443-001B	REEL DISK(TAKE-UP)ASSY
455	YQ44246	SLIT WASHER
456	LY30477-001F	CTL PLATE ASSY
457	YQ44246	SLIT WASHER,X2
458	LY40444-001E	LOADING BRAKE ASSY
459	YQ44246	SLIT WASHER
460	LY40452-001C	SUB BRAKE ASSY
461	YQ44246	SLIT WASHER
462	LY30479-001B	RELEASE GUIDE ASSY
463	YQ44246	SLIT WASHER
464	LY20146-001H	REEL COVER ASSY
465	YQ43893-4	MINI SCREW,X2
466	YQ43893	MINI SCREW
467	YQ44246	SLIT WASHER
468	YDV2086I	DRUM ASSY
469	YQ43893	MINI SCREW,X3
470	LY20138-001D	PWB HOLDER
471	YQ43893	MINI SCREW,X2
472	LY10082-001K	SLIDE DECK ASSY
473	LY30462-001B	LOADING GUIDE
474	YQ43893	MINI SCREW
475	YMA0025H	MECHA(A) ASSY
476	LY30016-0M1A	SPACER-A
478	LY30496-001S	DECK ASSY
480	LY41573-001A	WASHER

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-DVL805U]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REF No.	PART No.	PART NAME, DESCRIPTION
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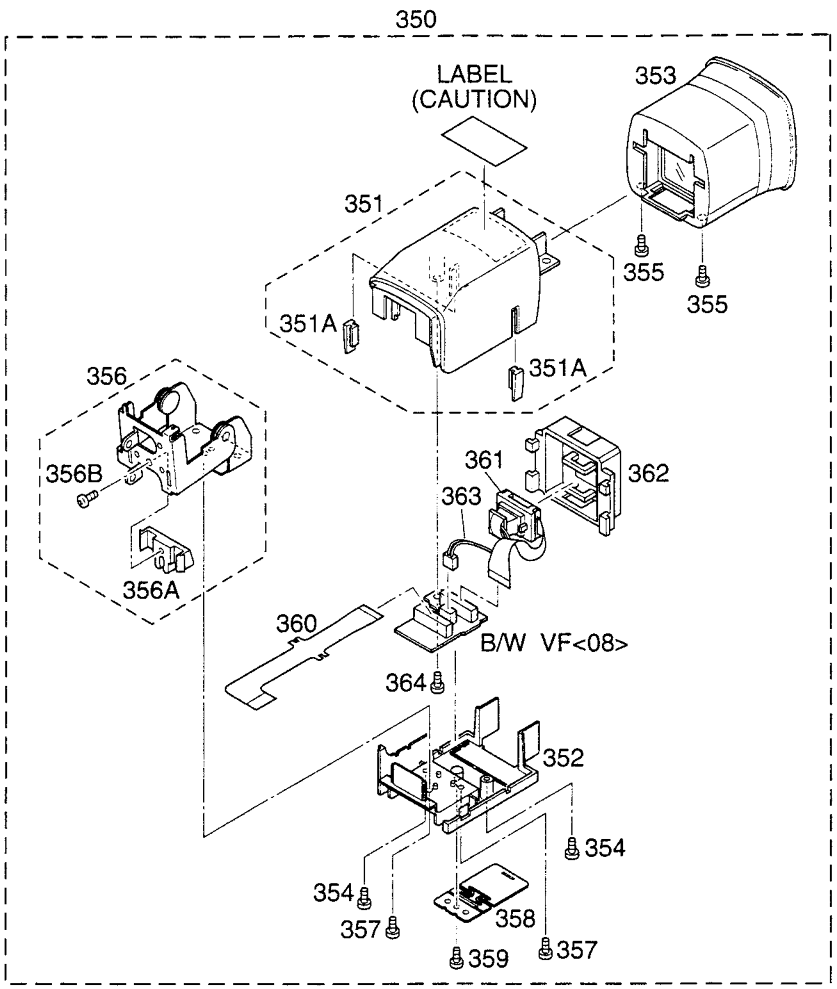
ELECTRONIC VIEWFINDER ASSEMBLY <M4>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
300	LY20596-001A	COLOR VF UNIT
301	LY31600-001A	VF CASE(UPPER)ASSY
301A	LY42170-001A	GUIDE,X2
302	LY20554-001A	VF CASE(LOWER)
303	LY20555-003A	EYE P.ASSY
304	LY30018-079A	SPECIAL SCREW,X2
305	LY30018-079A	SPECIAL SCREW,X2
306	LY31602-001A	HINGE(VF)ASSY
306A	LY31601-001A	CLIP(VF)
306B	LY30018-023A	SPECIAL SCREW
307	LY30018-066A	SPECIAL SCREW,X2
308	LY31250-001A	CAPACITOR
309	LY30018-063A	SPECIAL SCREW
310	QAL0223-001	FPC
311	PTY20596-051	LCD MODULE

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4> [GR-DVL505U]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# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
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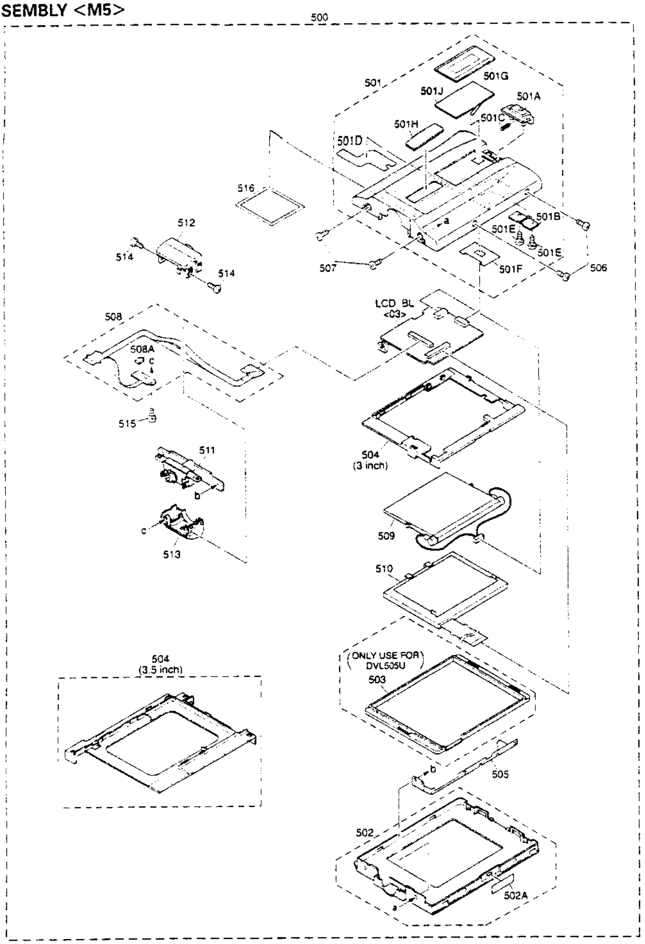
ELECTRONIC VIEWFINDER ASSEMBLY <M4>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
350	LYH20136-001A	E.VF ASSY
351	LY31600-001A	VF CASE(UPPER)ASSY
351A	LY42170-001A	GUIDE,X2
352	LY20554-001A	VF CASE(LOWER)
353	LY20555-004A	EYE P.ASSY
354	LY30018-079A	SPECIAL SCREW,X2
355	LY30018-079A	SPECIAL SCREW,X2
356	LY31602-001B	HINGE(VF)ASSY
356A	LY31601-001A	CLIP(VF)
356B	LY30018-023A	SPECIAL SCREW
357	LY30018-066A	SPECIAL SCREW,X2
358	LY31250-001A	CAPACITOR
359	LY30018-063A	SPECIAL SCREW
360	QAL0223-002	FPC
361	QLD0133-001	LCD MODULE
362	LY20481-001A	HOLDER(B/W LCD)
363	QLL0067-001	BACK LIGHT
364	LY30018-063A	SPECIAL SCREW

5.5 MONITOR ASSEMBLY <M5>



# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
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MONITOR ASSEMBLY <M5>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 500	LYH20135-005B	MONITOR ASSY,505U
⚠	LYH20135-006B	MONITOR ASSY,805U
⚠ 501	LY20565-005A	MONITOR COVER ASSY,505U
⚠	LY20565-006A	MONITOR COVER ASSY,805U
501A	LY31620-001A	KNOB(LOCK 1)
501B	LY42180-001A	KNOB(LOCK 2)
501C	LY30002-044A	COMPRES. SPRING
501D	LY42386-001A	EARTH MON
501E	LY30018-011A	SPECIAL SCREW,X2
501F	LY42368-001A	SHEET(MON)
501G	LY31621-002A	WINDOW
501H	LY42162-001A	MARK
501J	LY42193-001A	EL(WINDOW)
502	LY20598-001A	MONITOR CASE ASSY,505U
	LY20598-002A	MONITOR CASE ASSY,805U
502A	LY42388-001A	EARTH MON(2)
503	LY20566-001A	HOLDER(3LCD),505U
504	LY20567-001A	HOLDER(3PWB),505U
	LY20568-001A	HOLDER(3.5PWB),805U
505	LY31622-001A	BRACKET(EARTH)
506	QYSPSPT1730R	SCREW,X2
507	QYSLSP2040D	SCREW,X2
508	LY31743-001A	MONI.FPC ASSY
508A	NSW0095-001X	DETECT SWITCH
509	QLL0080-001	BACK LIGHT,505U
	QLL0081-001	BACK LIGHT,805U
510	QLD0096-002	LCD MODULE,805U
	QLD0118-001	LCD MODULE,505U
511	LY31236-003A	HINGE ASSY
512	LY31624-001A	HINGE COVER(1)
513	LY31625-001A	HINGE COVER(2)
514	LY30018-058A	SPECIAL SCREW,X2
515	LY30018-023A	SPECIAL SCREW
516	LY40559-001A	SHIELD SHEET

5.6 ELECTRICAL PARTS LIST

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
* *		

MAIN BOARD ASSEMBLY <01>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW	YB10277F-02	MAIN BOARD ASSY
IC1001	MN102F1617HL-N1	IC(MICRO C ROM)
	or MN1021617FS	IC(MICRO C ROM)
IC1002	MB90097PFV133	IC(MICRO C ROM)
IC1003	AT25160N-10SC-X	IC
	or NM25C160LZEM8	IC
IC1004	RS5C314	IC
IC1009	S-814A30AMC-W	IC
IC1010	IC-PST9323U-X	IC
IC1014	SN74LV08APW	IC
IC1015	TC7W66FK	IC
IC1301	SN74LV08APW	IC
IC1302	MAX3221CAE	IC
IC1303	SN74LV02APW	IC
IC1401	MN103004KRK	IC(MICRO C ROM)
	or YQ44849A	CSP IC ASSY
	or MN1030F04KYB-C1	IC(MICRO C ROM)
	or MN1030F14KYB-C1	IC(MICRO C ROM)
IC1402	TC7W14FU	IC(DIGITAL)
	or SN74AHC2G14T	IC
IC1403	TC7W66FK	IC
IC1405	TC7W53FU	IC(DIGITAL)
	or SN74AHC2G53T	IC
IC1601	BD6630KV	IC
IC2201	AK4560VQ	IC
IC3001	JCY0106-2	IC
IC3002	M51V18165D50TSK	IC(DIGITAL)
IC3005	SN74AHC1G04K	IC
IC3007	TC7SL00FU	IC(DIGITAL)
IC3101	PDI1394P11ABD	IC
IC3201	JCY0107QP	IC
IC3202	TC7SH00FU	IC(DIGITAL)
IC3301	JCY0108	IC
IC3501	AN3731FHQ	IC(DIGITAL)
IC3701	MM1510XN	IC
IC4201	HD49323AF	IC
IC4202	MM1385HN	IC
IC4301	JCY0120	IC(DIGITAL)
IC4302	MSM548331TA	IC(DIGITAL)
IC4303	MM1385NN	IC
IC4802	TA75W01FU	IC
IC4803	TA75W01FU	IC
IC4804	NJM3414AV	IC
IC4805	MM6564XFBE	IC
IC4851	UPD16879GS	IC
IC5501	JCY0117	IC
IC6001	FA3676F	IC
IC6301	S-80842ANNP-W	IC
Q1002	DTA144EE	TRANSISTOR
	or PDTA144EE	TRANSISTOR
Q1003	DTA114EE	TRANSISTOR
	or PDTA114EE	TRANSISTOR
Q1004	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
	or RN1104	TRANSISTOR
	or UN9213J	TRANSISTOR
Q1008	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
	or RN1104	TRANSISTOR
	or UN9213J	TRANSISTOR
Q1009	DTC144EE	TRANSISTOR
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Q1010	DTA114EE	TRANSISTOR
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Q1301	2SC4617/QR/-X	TRANSISTOR
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Q1601	UMC3N	TRANSISTOR
Q2201	2SC4617/QR/-X	TRANSISTOR
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Q2401	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q2402	2SD1511/R/-X	TRANSISTOR
Q2601	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q2602	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q2603	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q2604	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3501	2SC4226/4/-X	TRANSISTOR
Q3502	2SD1979/S/-X	TRANSISTOR
Q3503	2SD1979/S/-X	TRANSISTOR
Q3504	2SC4226/4/-X	TRANSISTOR
Q3505	2SA1577/QR/-X	TRANSISTOR
Q3506	DTC144EE	TRANSISTOR
	or PDTC144EE	TRANSISTOR
	or UN9213J	TRANSISTOR
	or RN1104	TRANSISTOR
Q3701	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3702	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3703	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q3704	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3705	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3706	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3707	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3708	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3709	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3710	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q3711	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR

	REF No.	PART No.	PART NAME, DESCRIPTION
	Q4302	UMT2N	PAIR TRANSISTOR
	Q4306	2SA1774/QR/-X	TRANSISTOR
		or 2SA1832/YG/-X	TRANSISTOR
	Q4803	2SC4655/BC/-X	TRANSISTOR
	Q4851	2SC4617/QR/-X	TRANSISTOR
		or 2SC4738/YG/-X	TRANSISTOR
	Q6111	CPH3304	MOS FET
	Q6121	CPH3304	MOS FET
	Q6123	2SB1121/TU/-X	TRANSISTOR
	Q6124	2SC4617/QR/-X	TRANSISTOR
		or 2SC4738/YG/-X	TRANSISTOR
	Q6131	CPH3304	MOS FET
	Q6132	DTC144EE	TRANSISTOR
		or RN1104	TRANSISTOR
		or PDTC144EE	TRANSISTOR
		or UN9213J	TRANSISTOR
	Q6141	CPH3304	MOS FET
	Q6151	CPH3304	MOS FET
	Q6161	CPH3304	MOS FET
	Q6162	HN1C01FU/G/-X	PAIR TRANSISTOR
		or PUMX1-W	PAIR TRANSISTOR
	Q6163	2SA1577/QR/-X	TRANSISTOR
	Q6165	HN1A01FU/G/-X	PAIR TRANSISTOR
		or PUMX1-W	PAIR TRANSISTOR
	Q6166	2SC4617/QR/-X	TRANSISTOR
		or 2SC4738/YG/-X	TRANSISTOR
	Q6167	2SA1774/QR/-X	TRANSISTOR
		or 2SA1832/YG/-X	TRANSISTOR
	Q6168	DTC144EE	TRANSISTOR
		or RN1104	TRANSISTOR
		or PDTC144EE	TRANSISTOR
		or UN9213J	TRANSISTOR
	Q6201	2SA1774/QR/-X	TRANSISTOR
		or 2SA1832/YG/-X	TRANSISTOR
	Q6202	2SD1621(TU)	TRANSISTOR
	Q6203	2SC4617/QR/-X	TRANSISTOR
		or 2SC4738/YG/-X	TRANSISTOR
	Q6301	DTC144EE	TRANSISTOR
		or RN1104	TRANSISTOR
		or PDTC144EE	TRANSISTOR
		or UN9213J	TRANSISTOR
	Q6302	2SK1830	MOS FET
	Q6303	2SJ347	MOS FET
	Q6304	2SK1830	MOS FET
	Q6305	CPH3304	MOS FET
⚠	D1001	RB715F	SB DIODE
	D1303	SB007W03Q	SB DIODE
	D1602	DAP222	DIODE
	D1603	DAP222	DIODE
	D1604	DAP222	DIODE
	D5501	1SS355	DIODE
	D6111	CRS06	SB DIODE
	D6121	CRS06	SB DIODE
	D6122	1SS357	SB DIODE
	D6131	CRS06	SB DIODE
	D6141	CRS06	SB DIODE
	D6151	CRS06	SB DIODE
	D6152	CRS06	SB DIODE
	D6161	1SS383	SB DIODE
	D6163	1SS383	SB DIODE
	D6165	MA8091/L/-X	ZENER DIODE

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R1001	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1003	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1004	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
⚠	R1005	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1006	NRSA6AD-823W	MG RESISTOR	82kΩ,1/16W
	R1007	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1008	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1009	NRSA6AD-473W	MG RESISTOR	47kΩ,1/16W
	R1010	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1011	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1012	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1013	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1014	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1015	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1017	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1018	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1021	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1022	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1025	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1026	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1034	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1035	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1037	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1038	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1042	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
	R1043	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1045	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1047	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1048	NRSA6AJ-393W	MG RESISTOR	39kΩ,1/16W
	R1049	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
	R1050	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1051	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1052	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1053	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1054	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
	R1055	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1056	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1057	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
	R1058	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R1060	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
	R1062	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1063	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
	R1065	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1066	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1067	NRSA6AJ-393W	MG RESISTOR	39kΩ,1/16W
	R1068	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
	R1069	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1070	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1071	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1072	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1073	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1074	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1076	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1077	NRVA6AD-473W	CMF RESISTOR	47kΩ,1/16W
	R1080	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1081	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1082	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1083	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1084	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1085	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1302	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R1307	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1408	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
	R1410	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
	R1412	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1413	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R1414	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1415	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1420	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
	R1427	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1428	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1429	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1430	NRSA6AJ-753W	MG RESISTOR	75kΩ,1/16W
	R1431	NRSA6AJ-334W	MG RESISTOR	330kΩ,1/16W
	R1432	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1433	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1434	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W
	R1435	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1438	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1439	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1444	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1445	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1446	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1447	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1450	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1451	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1452	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1453	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R1458	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
	R1459	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1460	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
	R1461	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1464	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
	R1465	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R1466	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1467	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1468	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1469	NRSA6AJ-221W	MG RESISTOR	220Ω,1/16W
	R1470	NRSA6AJ-221W	MG RESISTOR	220Ω,1/16W
	R1471	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1474	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1475	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R1476	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
	R1477	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1480	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1601	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
	R1602	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
	R1603	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1604	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1605	NRV142F-R22X	CMF RESISTOR	0.22Ω,1/4W
	R1606	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1609	NRV142F-R33X	CMF RESISTOR	0.33Ω,1/4W
	R1610	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
	R1611	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
	R1612	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R1613	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R1614	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
	R1615	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1616	NRSA6AJ-391W	MG RESISTOR	390Ω,1/16W
	R1617	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
	R1618	NRSA6AJ-154W	MG RESISTOR	150kΩ,1/16W
	R1619	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R1620	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1621	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1622	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1624	NRSA6AD-123W	MG RESISTOR	12kΩ,1/16W
	R1625	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1626	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1627	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1628	NRSA6AD-361W	MG RESISTOR	360Ω,1/16W
	R1629	NRSA6AJ-684W	MG RESISTOR	680kΩ,1/16W
	R1630	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1631	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R1635	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R1636	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R1637	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
	R1644	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2101	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2102	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2103	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2104	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2105	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2106	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
	R2201	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W
	R2202	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω,1/16W
	R2203	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
	R2204	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R2205	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
	R2206	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
	R2207	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2208	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2209	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2213	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
	R2214	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2401	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
	R2402	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
	R2403	NRSA6AJ-820W	MG RESISTOR	82Ω,1/16W
	R2404	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2405	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2406	NRSA6AJ-113W	MG RESISTOR	11kΩ,1/16W
	R2601	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2602	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2603	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R2604	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
	R2605	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2606	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2607	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2608	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
	R2609	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2610	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2611	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2612	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
	R2613	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
	R2614	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
	R2615	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R2616	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R2621	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R2622	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
	R2623	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R2624	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
	R2625	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
	R2626	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
	R2627	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R2628	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2629	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2630	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R2631	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2632	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R2633	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R2634	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R2635	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R2636	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3002	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3007	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3008	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R3030	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R3031	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R3032	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3052	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3054	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3056	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3057	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3058	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3059	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3060	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3062	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R3063	NRSA6AJ-124W	MG RESISTOR	120kΩ,1/16W
R3101	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3102	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3103	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R3105	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R3106	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3113	NRSA6AJ-394W	MG RESISTOR	390kΩ,1/16W
R3115	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R3117	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3118	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3119	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3120	NRSA6AJ-560W	MG RESISTOR	56Ω,1/16W
R3121	NRSA6AJ-512W	MG RESISTOR	5.1kΩ,1/16W
R3128	NRSA6AJ-512W	MG RESISTOR	5.1kΩ,1/16W
R3201	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3202	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3211	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R3212	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3215	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3221	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3224	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3234	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3236	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3303	NRSA6AJ-391W	MG RESISTOR	390Ω,1/16W
R3304	NRSA6AJ-121W	MG RESISTOR	120Ω,1/16W
R3307	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3308	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3309	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3310	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3312	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3313	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3314	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R3315	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3316	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3317	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3318	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R3330	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3331	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3332	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R3333	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3334	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3335	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3336	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3337	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3338	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3339	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3341	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3343	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3344	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R3345	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R3346	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R3347	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3348	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3349	NRVA6AD-273W	CMF RESISTOR	27kΩ,1/16W
R3350	NRVA6AD-183W	CMF RESISTOR	18kΩ,1/16W
R3351	NRVA6AD-121W	CMF RESISTOR	120Ω,1/16W
R3357	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3361	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R3362	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3363	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3364	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3366	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R3367	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3379	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R3380	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R3502	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3504	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3506	NRSA6AJ-471W	MG RESISTOR	470Ω,1/16W
R3507	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3508	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R3509	NRSA6AJ-331W	MG RESISTOR	330Ω,1/16W
R3510	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3511	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3512	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3513	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3514	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3515	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R3516	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R3517	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R3518	NRSA6AJ-680W	MG RESISTOR	68Ω,1/16W
R3519	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3520	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3521	NRSA6AJ-100W	MG RESISTOR	10Ω,1/16W
R3523	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R3524	NRSA6AJ-392W	MG RESISTOR	3.9kΩ,1/16W
R3701	NRVA6AD-561W	CMF RESISTOR	560Ω,1/16W
R3702	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R3703	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3704	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R3705	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3706	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3708	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3709	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3710	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R3711	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3712	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3713	NRSA6AJ-101W	MG RESISTOR	100Ω,1/16W
R3714	NRVA6AD-331W	CMF RESISTOR	330Ω,1/16W
R3715	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3716	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R3717	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R3718	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3719	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3720	NRSA6AJ-332W	MG RESISTOR	3.3kΩ,1/16W
R3721	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3722	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3723	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
R3724	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3725	NRSA6AJ-561W	MG RESISTOR	560Ω,1/16W
R3726	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R3727	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R3728	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4201	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4203	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4204	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4205	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4206	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4207	NRSA6AJ-243W	MG RESISTOR	24kΩ,1/16W
R4302	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4304	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4305	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4309	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4311	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4313	NRVA6AD-272W	CMF RESISTOR	2.7kΩ,1/16W
R4315	NRVA6AD-750W	CMF RESISTOR	75Ω,1/16W
R4316	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4317	NRVA6AD-620W	CMF RESISTOR	62Ω,1/16W
R4318	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4328	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R4329	NRSA6AJ-682W	MG RESISTOR	6.8kΩ,1/16W
R4330	NRSA6AJ-220W	MG RESISTOR	22Ω,1/16W
R4333	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4334	NRVA6AD-221W	CMF RESISTOR	220Ω,1/16W
R4335	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4338	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4339	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4341	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4342	NRVA6AD-750W	CMF RESISTOR	75Ω,1/16W
R4343	NRVA6AD-101W	CMF RESISTOR	100Ω,1/16W
R4350	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4351	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4352	NRVA6AD-123W	CMF RESISTOR	12kΩ,1/16W
R4353	NRVA6AD-103W	CMF RESISTOR	10kΩ,1/16W
R4354	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R4355	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R4357	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4358	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4359	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4360	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4361	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4801	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R4802	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4803	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4804	NRSA6AJ-151W	MG RESISTOR	150Ω,1/16W
R4805	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4806	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R4807	NRSA6AJ-683W	MG RESISTOR	68kΩ,1/16W
R4808	NRSA6AJ-243W	MG RESISTOR	24kΩ,1/16W
R4809	NRSA6AJ-681W	MG RESISTOR	680Ω,1/16W
R4810	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R4811	NRSA6AJ-564W	MG RESISTOR	560kΩ,1/16W
R4812	NRSA6AJ-153W	MG RESISTOR	15kΩ,1/16W
R4814	NRSA6AJ-105W	MG RESISTOR	1MΩ,1/16W
R4815	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R4816	NRSA6AJ-185W	MG RESISTOR	1.8MΩ,1/16W
R4817	NRSA6AJ-564W	MG RESISTOR	560kΩ,1/16W
R4818	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4819	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4820	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R4821	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R4822	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4823	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4824	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R4825	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
R4826	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4827	NRSA6AJ-122W	MG RESISTOR	1.2kΩ,1/16W
R4851	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4853	NRSA6AJ-271W	MG RESISTOR	270Ω,1/16W
R4854	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R4856	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4857	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4858	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R4859	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4860	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4862	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4863	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
R4864	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4865	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4866	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4867	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R4868	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4869	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R4871	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5501	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5503	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5504	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5505	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5506	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5507	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R5509	NRSA6AJ-470W	MG RESISTOR	47Ω,1/16W
R5510	NRSA6AJ-470W	MG RESISTOR	47Ω,1/16W
R5511	NRSA6AJ-470W	MG RESISTOR	47Ω,1/16W
R5512	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R5513	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R5514	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6001	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
R6002	NRSA6AJ-184W	MG RESISTOR	180kΩ,1/16W
R6009	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6010	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6011	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6012	NRSA6AJ-472W	MG RESISTOR	4.7kΩ,1/16W
R6111	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6112	NRVA6AD-223W	CMF RESISTOR	22kΩ,1/16W
R6113	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6121	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6122	NRVA6AD-183W	CMF RESISTOR	18kΩ,1/16W
R6123	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R6125	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6126	NRSA6AJ-152W	MG RESISTOR	1.5kΩ,1/16W
R6127	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6131	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W

△ REF No.	PART No.	PART NAME, DESCRIPTION	
R6132	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6133	NRSA6AJ-243W	MG RESISTOR	24kΩ,1/16W
R6134	NRVA6AD-302W	CMF RESISTOR	3kΩ,1/16W
R6135	NRSA6AJ-123W	MG RESISTOR	12kΩ,1/16W
R6136	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6137	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R6138	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6141	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6142	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6143	NRSA6AJ-562W	MG RESISTOR	5.6kΩ,1/16W
R6144	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
R6145	NRSA6AJ-223W	MG RESISTOR	22kΩ,1/16W
R6146	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6151	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6152	NRVA6AD-123W	CMF RESISTOR	12kΩ,1/16W
R6153	NRVA6AD-113W	CMF RESISTOR	11kΩ,1/16W
R6161	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω,1/16W
R6162	NRVA6AD-683W	CMF RESISTOR	68kΩ,1/16W
R6163	NRVA6AD-472W	CMF RESISTOR	4.7kΩ,1/16W
R6165	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6166	NRSA6AJ-273W	MG RESISTOR	27kΩ,1/16W
R6167	NRSA6AJ-822W	MG RESISTOR	8.2kΩ,1/16W
R6168	NRVA6AD-513W	CMF RESISTOR	51kΩ,1/16W
R6169	NRVA6AD-823W	CMF RESISTOR	82kΩ,1/16W
R6170	NRVA6AD-473W	CMF RESISTOR	47kΩ,1/16W
R6172	NRVA6AD-623W	CMF RESISTOR	62kΩ,1/16W
R6174	NRVA6AD-823W	CMF RESISTOR	82kΩ,1/16W
R6175	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R6176	NRSA6AJ-333W	MG RESISTOR	33kΩ,1/16W
R6177	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6178	NRSA6AJ-222W	MG RESISTOR	2.2kΩ,1/16W
R6179	NRSA6AJ-272W	MG RESISTOR	2.7kΩ,1/16W
R6180	NRSA6AJ-823W	MG RESISTOR	82kΩ,1/16W
R6181	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6182	NRSA6AJ-473W	MG RESISTOR	47kΩ,1/16W
R6201	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6202	NRSA6AJ-181W	MG RESISTOR	180Ω,1/16W
R6203	NRSA6AJ-103W	MG RESISTOR	10kΩ,1/16W
R6205	NRSA6AJ-184W	MG RESISTOR	180kΩ,1/16W
R6206	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6301	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6302	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6303	NRSA6AJ-224W	MG RESISTOR	220kΩ,1/16W
R6304	NRSA6AJ-183W	MG RESISTOR	18kΩ,1/16W
R6305	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6306	NRSA6AJ-104W	MG RESISTOR	100kΩ,1/16W
R6307	NRSA6AJ-102W	MG RESISTOR	1kΩ,1/16W
R6914	NRSA6AJ-0R0W	MG RESISTOR	0Ω,1/16W
RA1001	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1002	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1003	NRZ0034-104W	NETWORK RESISTOR	100kΩ
RA1004	NRZ0034-104W	NETWORK RESISTOR	100kΩ
RA1005	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1006	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1401	NRZ0034-473W	NETWORK RESISTOR	47kΩ
RA1402	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA1403	NRZ0034-102W	NETWORK RESISTOR	1kΩ
RA4301	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4302	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4303	NRZ0034-101W	NETWORK RESISTOR	100Ω
RA4304	NRZ0034-560W	NETWORK RESISTOR	56Ω

# △ REF No.	PART No.	PART NAME. DESCRIPTION	
RA4305	NRZ0034-560W	NETWORK RESISTOR	56Ω
RA4306	NRZ0034-560W	NETWORK RESISTOR	56Ω
C1003	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1004	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1008	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1009	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1010	NBE20JM-226X	T CAPACITOR	22μF,6.3V
C1011	NBP41CM-226X	T CAPACITOR	22μF,16V
C1012	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1013	NDCA1HJ-120W	CAPACITOR	12pF,50V
C1015	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1016	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1019	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1021	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1022	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1023	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1024	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1026	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1027	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1028	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1031	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1032	NBE40JM-226X	T CAPACITOR	22μF,6.3V
C1034	NBE40JM-226X	T CAPACITOR	22μF,6.3V
C1037	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1041	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1042	NCFA1HZ-103W	CAPACITOR	0.01μF,50V
C1043	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1301	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1302	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1303	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1304	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1305	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1306	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1307	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1401	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1402	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1414	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1415	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1416	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1417	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1418	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1419	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1420	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1421	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1422	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1423	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1424	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C1425	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C1601	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C1602	NBE21AM-106X	T CAPACITOR	10μF,10V
C1603	NBE21AM-106X	T CAPACITOR	10μF,10V
C1605	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1606	NCBA1HK-152W	CAPACITOR	0.0015μF,50V
C1607	NCBA1AK-473W	CAPACITOR	0.047μF,10V
C1614	NBE21AM-106X	T CAPACITOR	10μF,10V
C1618	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
C1619	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
C1620	NCBA1HK-222W	CAPACITOR	0.0022μF,50V
C1621	NCB21AK-105X	CAPACITOR	1μF,10V
C1622	NCBA1CK-223W	CAPACITOR	0.022μF,16V
C1623	NCBA1AK-473W	CAPACITOR	0.047μF,10V

# △ REF No.	PART No.	PART NAME, DESCRIPTION	
C1624	NCB31EK-103X	CAPACITOR	0.01μF,25V
C1625	NCBA1AK-473W	CAPACITOR	0.047μF,10V
C1626	NCBA1HK-331W	CAPACITOR	330pF,50V
C1627	NCBA1CK-822W	CAPACITOR	0.0082μF,16V
C1628	NCB21CK-224X	CAPACITOR	0.22μF,16V
C1632	NBE21AM-106X	T CAPACITOR	10μF,10V
C1633	NCF21CZ-684X	CAPACITOR	0.68μF,16V
C1635	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C1641	NCB31AK-474X	CAPACITOR	0.47μF,10V
C2101	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2103	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2201	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2202	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2203	NBP21CM-105X	T CAPACITOR	1μF,16V
C2205	NBP21CM-105X	T CAPACITOR	1μF,16V
C2207	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2208	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2209	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2210	NCBA1CK-153W	CAPACITOR	0.015μF,16V
C2211	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2212	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2213	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2214	NBP21CM-105X	T CAPACITOR	1μF,16V
C2216	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2217	NCB30JK-105X	CAPACITOR	1μF,6.3V
C2401	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2402	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2601	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C2602	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C2603	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2604	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2605	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2606	NCBA1AK-333W	CAPACITOR	0.033μF,10V
C2607	NBP21CM-105X	T CAPACITOR	1μF,16V
C2608	NBP21CM-105X	T CAPACITOR	1μF,16V
C2609	NBP21VM-104X	T CAPACITOR	0.1μF,35V
C2610	NBP21VM-104X	T CAPACITOR	0.1μF,35V
C2617	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2618	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C2619	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C2620	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C2622	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2623	NBP21CM-105X	T CAPACITOR	1μF,16V
C2624	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2625	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2626	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2627	NCBA1EK-562W	CAPACITOR	0.0056μF,25V
C2628	NCB31CK-473X	CAPACITOR	0.047μF,16V
C2629	NCB31CK-473X	CAPACITOR	0.047μF,16V
C2630	NCBA1CK-123W	CAPACITOR	0.012μF,16V
C2631	NCBA1CK-123W	CAPACITOR	0.012μF,16V
C2632	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2633	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2634	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2635	NCBA1HK-332W	CAPACITOR	0.0033μF,50V
C2636	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C2637	NCBA1EK-682W	CAPACITOR	0.0068μF,25V
C3003	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3004	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3006	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3009	NDCA1HJ-100W	CAPACITOR	10pF,50V

# △ REF No.	PART No.	PART NAME. DESCRIPTION	
C3010	NDCA1HJ-100W	CAPACITOR	10pF,50V
C3011	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3012	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3022	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3023	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3027	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3028	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3035	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3037	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3038	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3040	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3041	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3042	NCB30JK-474X	CAPACITOR	0.47μF,6.3V
C3047	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3048	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3049	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3050	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3101	NDCA1EJ-271W	CAPACITOR	270pF,25V
C3102	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3103	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3104	NCB30JK-105X	CAPACITOR	1μF,6.3V
C3105	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3106	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3107	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3108	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3109	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3203	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3204	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3205	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3207	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3208	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3212	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3213	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3214	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3215	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3217	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3218	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3219	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3220	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3221	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3222	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3223	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3224	NCFA1AZ-104W	CAPACITOR	0.1μF,10V
C3231	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3232	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3301	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3302	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3303	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3304	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3305	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3306	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3307	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3308	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3309	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3310	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3311	NDCA1HJ-151W	CAPACITOR	150pF,50V
C3313	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3314	NCBA1HK-102W	CAPACITOR	0.001μF,50V
C3316	NCBA1AK-104W	CAPACITOR	0.1μF,10V
C3317	NCBA1CK-103W	CAPACITOR	0.01μF,16V
C3318	NCBA1CK-103W	CAPACITOR	0.01μF,16V

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3319	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3320	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3321	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3322	NCBA1AK-683W	CAPACITOR	0.068µF,10V
C3323	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3324	NCBA1AK-333W	CAPACITOR	0.033µF,10V
C3326	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3327	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3328	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3331	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3332	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3333	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3334	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3335	NDCA1HJ-100W	CAPACITOR	10pF,50V
C3336	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3337	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3501	NCBA1HK-122W	CAPACITOR	0.0012µF,50V
C3502	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C3503	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C3504	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3505	NDCA1HJ-470W	CAPACITOR	47pF,50V
C3506	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3507	NCBA1HK-681W	CAPACITOR	680pF,50V
C3508	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3509	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3510	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3511	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3512	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3513	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3514	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3515	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3516	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3517	NCBA1HK-152W	CAPACITOR	0.0015µF,50V
C3518	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3519	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3520	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3521	NDCA1HJ-220W	CAPACITOR	22pF,50V
C3522	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3523	NCB21AK-105X	CAPACITOR	1µF,10V
C3524	NCB21AK-105X	CAPACITOR	1µF,10V
C3525	NDCA1HJ-220W	CAPACITOR	22pF,50V
C3526	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3527	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3528	NDCA1HJ-330W	CAPACITOR	33pF,50V
C3529	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3530	NCBA1HK-152W	CAPACITOR	0.0015µF,50V
C3531	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3532	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3533	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C3534	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3535	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C3701	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3702	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3703	NDCA1HJ-820W	CAPACITOR	82pF,50V
C3704	NDCA1HJ-150W	CAPACITOR	15pF,50V
C3705	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3706	NCB30JK-105X	CAPACITOR	1µF,6.3V
C3707	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C3708	NDCA1HJ-101W	CAPACITOR	100pF,50V
C3709	NDCA1HJ-150W	CAPACITOR	15pF,50V
C3710	NCBA1CK-103W	CAPACITOR	0.01µF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3711	NBE20JM-226X	T CAPACITOR	22µF,6.3V
C3712	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C3713	NBE20GM-106X	T CAPACITOR	10µF,4.0V
C3714	NBE40GM-107X	T CAPACITOR	100µF,4.0V
C4201	NBE40GM-107X	T CAPACITOR	100µF,4.0V
C4202	NCBA1AK-104W	CAPACITOR	0.1µF,10V.
C4203	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4204	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4205	NCB21CK-105X	CAPACITOR	1µF,16V
C4206	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4207	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4209	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4210	NCB21CK-105X	CAPACITOR	1µF,16V
C4211	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4212	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4213	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4214	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4215	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4216	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4217	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4301	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4302	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4303	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4304	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4305	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4306	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4307	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4308	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4309	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4310	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4311	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C4312	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4314	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4315	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4316	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4317	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4318	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4319	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4320	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4321	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4322	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4323	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4324	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4325	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4326	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4327	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4328	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4329	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4330	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4331	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4332	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4333	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4335	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4336	NDCA1HJ-120W	CAPACITOR	12pF,50V
C4337	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4338	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4339	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4340	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4342	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4343	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4344	NCBA1AK-104W	CAPACITOR	0.1µF,10V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C4345	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4346	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4347	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4351	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4352	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4353	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4801	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4802	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4803	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4804	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4805	NDCA1HJ-101W	CAPACITOR	100pF,50V
C4806	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4808	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4809	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4810	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C4811	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C4812	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4813	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4814	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4815	NDC31HJ-331X	CAPACITOR	330pF,50V
C4818	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4819	NCB30JK-105X	CAPACITOR	1µF,6.3V
C4821	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4851	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4852	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4853	NBE21AM-106X	T CAPACITOR	10µF,10V
C4854	NBE21AM-106X	T CAPACITOR	10µF,10V
C4855	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C4858	NDCA1HJ-680W	CAPACITOR	68pF,50V
C4859	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4860	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4861	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4862	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C4864	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C4865	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C5501	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5503	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5504	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5505	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5506	NBE40GM-476X	T CAPACITOR	47µF,4.0V
C5507	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5508	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5509	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5510	NBP21VM-105X	T CAPACITOR	1µF,35V
C5511	NBP21DM-475X	T CAPACITOR	4.7µF,20V
C5512	NBE21AM-106X	T CAPACITOR	10µF,10V
C5513	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5514	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5515	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5516	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C5517	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5518	NCBA1AK-104W	CAPACITOR	0.1µF,10V
C5519	NCFA1AZ-104W	CAPACITOR	0.1µF,10V
C6001	NCB21CK-105X	CAPACITOR	1µF,16V
C6002	NCB21CK-105X	CAPACITOR	1µF,16V
C6003	NEA71CM-106X	E CAPACITOR	10µF,16V
C6004	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6005	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6006	NCB31CK-473X	CAPACITOR	0.047µF,16V
C6007	NCF21CZ-105X	CAPACITOR	1µF,16V
C6008	NCB21CK-105X	CAPACITOR	1µF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C6009	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6010	NCF21CZ-105X	CAPACITOR	1µF,16V
C6011	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6012	NCBA1HK-272W	CAPACITOR	0.0027µF,50V
C6013	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6014	NCBA1HK-561W	CAPACITOR	560pF,50V
C6015	NCBA1HK-561W	CAPACITOR	560pF,50V
C6016	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6017	NDCA1HJ-101W	CAPACITOR	100pF,50V
C6018	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C6019	NCF21CZ-105X	CAPACITOR	1µF,16V
C6111	NCB21CK-105X	CAPACITOR	1µF,16V
C6113	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6114	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6121	NCB21CK-105X	CAPACITOR	1µF,16V
C6123	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6124	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6125	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C6126	NCB21CK-105X	CAPACITOR	1µF,16V
C6127	NCB21CK-105X	CAPACITOR	1µF,16V
C6131	NCB21CK-105X	CAPACITOR	1µF,16V
C6132	NCB21CK-105X	CAPACITOR	1µF,16V
C6133	NCB31CK-683X	CAPACITOR	0.068µF,16V
C6141	NCB21CK-105X	CAPACITOR	1µF,16V
C6142	NCB21CK-105X	CAPACITOR	1µF,16V
C6143	NCB21CK-224X	CAPACITOR	0.22µF,16V
C6151	NCB21CK-105X	CAPACITOR	1µF,16V
C6153	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6154	NCBA1EK-472W	CAPACITOR	0.0047µF,25V
C6155	NCB30JK-105X	CAPACITOR	1µF,6.3V
C6161	NCB21CK-105X	CAPACITOR	1µF,16V
C6162	NCB11EK-105X	CAPACITOR	1µF,25V
C6163	NCBA1HK-102W	CAPACITOR	0.001µF,50V
C6164	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6167	NCB21CK-105X	CAPACITOR	1µF,16V
C6168	NCB11EK-105X	CAPACITOR	1µF,25V
C6169	NCB21CK-105X	CAPACITOR	1µF,16V
C6171	NCB21CK-105X	CAPACITOR	1µF,16V
C6173	NCB21CK-105X	CAPACITOR	1µF,16V
C6174	NCB21CK-105X	CAPACITOR	1µF,16V
C6175	NCB21CK-105X	CAPACITOR	1µF,16V
C6201	NEA71CM-106X	E CAPACITOR	10µF,16V
C6301	NCBA1CK-103W	CAPACITOR	0.01µF,16V
C6401	NCB21CK-105X	CAPACITOR	1µF,16V
C6402	NCB21CK-105X	CAPACITOR	1µF,16V
L1001	NQL315K-100X	COIL	10µH
L1002	NQL315K-100X	COIL	10µH
L1003	NQL315K-100X	COIL	10µH
L1401	NQL034K-100X	COIL	10µH
L1602	NQL315M-1R0X	COIL	1µH
L2101	NQL315K-100X	COIL	10µH
L2601	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L2602	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L2603	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3001	NQR0129-002X	FERRITE BEAD	
L3002	NQR0129-002X	FERRITE BEAD	
L3004	NQR0129-002X	FERRITE BEAD	
L3005	NQR0129-002X	FERRITE BEAD	
L3101	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3102	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L3103	NQR0384-003X	COIL	

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L3104	NQR0384-003X	COIL	
L3202	NQR0129-002X	FERRITE BEAD	
L3203	NQR0129-002X	FERRITE BEAD	
L3204	NQR0129-002X	FERRITE BEAD	
L3301	NQR0129-002X	FERRITE BEAD	
L3302	NQR0129-002X	FERRITE BEAD	
L3303	NQR0129-002X	FERRITE BEAD	
L3304	NQR0129-002X	FERRITE BEAD	
L3501	NQL402M-100X	COIL	10µH
L3502	NQL402M-100X	COIL	10µH
L3503	NQL085J-220X	COIL	22µH
L3504	NQL085J-220X	COIL	22µH
L3505	NQL402M-100X	COIL	10µH
L3506	NQL402M-100X	COIL	10µH
L3507	NQL315K-100X	COIL	10µH
L3701	NQL315K-101X	COIL	100µH
L3702	NQL315K-220X	COIL	22µH
L4201	NQR0129-002X	FERRITE BEAD	
L4301	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L4302	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L4303	NQL315K-100X	COIL	10µH
L4304	NQL315K-220X	COIL	22µH
L4305	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L4306	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L4307	NQL315K-100X	COIL	10µH
L4801	NQL315K-100X	COIL	10µH
L4802	NQL315K-100X	COIL	10µH
L4851	NQR0129-002X	FERRITE BEAD	
L4852	NQL315K-100X	COIL	10µH
L4853	NQL315K-100X	COIL	10µH
L5501	NQL315K-100X	COIL	10µH
L5502	NQR0129-002X	FERRITE BEAD	
L5503	NQR0129-002X	FERRITE BEAD	
L5504	NQR0129-002X	FERRITE BEAD	
L5505	NQL315K-100X	COIL	10µH
L5506	NQL315K-100X	COIL	10µH
L6001	NQLZ011-4R7X	COIL	4.7µH
L6002	NQLZ011-4R7X	COIL	4.7µH
L6111	NQLZ011-390X	COIL	39µH
L6114	NQL144K-220X	COIL	22µH
L6121	NQLZ011-390X	COIL	39µH
L6123	NQL144K-101X	COIL	100µH
L6124	NQL144K-101X	COIL	100µH
L6131	NQLZ011-470X	COIL	47µH
L6141	NQLZ011-470X	COIL	47µH
L6151	NQLZ011-470X	COIL	47µH
L6161	NQLZ011-221X	COIL	220µH
L6401	NQL144K-220X	COIL	22µH
X1001	NAX0294-001X	RESONATOR	
X1002	NAX0325-001X	CRYSTAL RESONATOR	
X3001	NAX0206-001X	CRYSTAL RESONATOR	
X3301	NAX0296-001X	C OSCILLATOR	
X5501	NAX0356-001X	CXO	
WR1	WJJ0148-001A	E-ST C WIRE C-C	
WR2	WJT0027-001A	FFC WIRE	
CN101	QGF0503C1-32V	FFC/FPC CONNECTOR	
CN102	QGF0505F2-22X	FPC CONNECTOR	
CN103	QGA1201F2-11X	CONNECTOR	
CN104	QGA1201F2-02X	CONNECTOR	
CN105	*QGB0801K3-20X*	*CONNECTOR*	
CN106	QGA1201F2-03X	CONNECTOR	
CN107	QGF0503C1-18X	FFC/FPC CONNECTOR	
CN108	QGF0512C1-24X	FPC CONNECTOR	
CN109	QGB0509M1-30X	CONNECTOR	
CN110	QGF0505F1-08X	FPC CONNECTOR	
CN111	QGF0503C1-06V	FFC/FPC CONNECTOR	
CN112	QGF0505F2-18X	FPC CONNECTOR	
CN113	QGF0508F1-33X	FPC CONNECTOR	
CN114	QGF0507F1-15X	FPC CONNECTOR	
⚠ F6001	NMFZ009-2R0X-J1	FUSE	T2.0A
⚠ F6003	NMFZ009-R50X-J1	FUSE	T0.5A
⚠ F6005	NMFZ009-R50X-J1	FUSE	T0.5A
OT1	LY30029-043A	SPACER(A)	
OT2	LY30029-055A	SPACER(A)	
SD1	LY31656-001A	SHIELD CASE(1)	

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MONITOR BOARD ASSEMBLY<02>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW1	YB10280F1-01	MONITOR BOARD ASSY,505U	
	YB10280G1-01	MONITOR BOARD ASSY,805U	
IC7101	PCVVQ110BFB	IC,505U	
IC7601	AN2533FH	IC	
IC7603	AT25040N-10SC-X	IC	
IC7604	BU4053BCFV	IC,805U	
IC7605	TC4W53FU	IC,805U	
IC7606	TC7S04FU	IC,805U	
IC7607	TC7S08FU	IC(DIGITAL),805U	
Q7602	DTC144EE	TRANSISTOR,805U	
Q7603	DTA144EE	TRANSISTOR,805U	
Q7604	DTA114YE	TRANSISTOR,805U	
Q7605	DTA114YE	TRANSISTOR,805U	
Q7606	DTA114YE	TRANSISTOR,805U	
Q7607	2SC4617/QR/-X	TRANSISTOR	
Q7608	2SA1774/QR/-X	TRANSISTOR	
Q7609	2SC4617/QR/-X	TRANSISTOR	
Q7610	2SA1774/QR/-X	TRANSISTOR	
Q7615	DTA144EE	TRANSISTOR	
Q7616	DTC144EE	TRANSISTOR,805U	
Q7617	DTA114EE	TRANSISTOR,805U	
Q7618	DTC144EE	TRANSISTOR,805U	
Q7619	UMZ1N	PAIR TRANSISTOR,805U	
D7101	MA111	DIODE,505U	
D7601	RB471E	SB DIODE	
D7603	MA111	DIODE,805U	
R2	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R5	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R6	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R7	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
R7103	NRSA02J-0R0X	MG RESISTOR,505U	0Ω,1/10W
R7104	NRSA63J-0R0X	MG RESISTOR,505U	0Ω,1/16W
R7107	NRSA63J-271X	MG RESISTOR,505U	270Ω,1/16W
R7108	NRSA63J-182X	MG RESISTOR,505U	1.8kΩ,1/16W
R7114	NRSA63J-223X	MG RESISTOR,505U	22kΩ,1/16W
R7115	NRSA63J-153X	MG RESISTOR,505U	15kΩ,1/16W
R7118	NRSA63J-153X	MG RESISTOR,505U	15kΩ,1/16W
R7121	NRSA63J-473X	MG RESISTOR,505U	47kΩ,1/16W
R7604	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7610	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7611	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R7612	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7613	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R7616	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7631	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7632	NRSA63J-101X	MG RESISTOR,505U	100Ω,1/16W
R7633	NRSA63J-101X	MG RESISTOR,505U	100Ω,1/16W
R7634	NRSA63J-101X	MG RESISTOR,505U	100Ω,1/16W
R7635	NRSA63J-220X	MG RESISTOR,805U	22Ω,1/16W
R7636	NRSA63J-220X	MG RESISTOR,805U	22Ω,1/16W
R7637	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7638	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7639	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7640	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7641	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7642	NRVA63D-123X	CMF RESISTOR,805U	12kΩ,1/16W
R7643	NRSA63J-220X	MG RESISTOR,805U	22Ω,1/16W
R7645	NRSA63J-473X	MG RESISTOR,805U	47kΩ,1/16W
R7646	NRSA63J-103X	MG RESISTOR,805U	10kΩ,1/16W
R7649	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7650	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7651	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7652	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7653	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7654	NRVA63D-222X	CMF RESISTOR	2.2kΩ,1/16W
R7657	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
R7659	NRSA63J-335X	MG RESISTOR	3.3MΩ,1/16W
R7660	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7661	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
R7663	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7664	NRSA63J-682X	MG RESISTOR	6.8kΩ,1/16W
R7665	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7666	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7667	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R7668	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
R7670	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
R7672	NRSA63J-0R0X	MG RESISTOR,505U	0Ω,1/16W
R7673	NRSA63J-223X	MG RESISTOR,805U	22kΩ,1/16W
R7674	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R7677	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7678	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7679	NRSA63J-822X	MG RESISTOR,805U	8.2kΩ,1/16W
R7681	NRSA63J-0R0X	MG RESISTOR,505U	0Ω,1/16W
	NRSA63J-331X	MG RESISTOR,805U	330Ω,1/16W
R7685	NRSA63J-392X	MG RESISTOR,805U	3.9kΩ,1/16W
R7687	NRSA63J-183X	MG RESISTOR,805U	18kΩ,1/16W
R7688	NRSA63J-334X	MG RESISTOR,805U	330kΩ,1/16W
R7689	NRSA63J-224X	MG RESISTOR,805U	220kΩ,1/16W
R7690	NRSA63J-393X	MG RESISTOR,805U	39kΩ,1/16W
VR7101	NVP0016-223X	TRIM RESISTOR,GAIN,505U	
VR7102	NVP0016-223X	TRIM RESISTOR,BLACK LEVEL,505U	
C1	NCB31EK-103X	CAPACITOR	0.01µF,25V
C7102	NDC31HJ-181X	CAPACITOR,505U	180pF,50V
C7103	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7104	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7105	NBE20JM-475X	T CAPACITOR,505U	4.7µF,6.3V
C7106	NCB21HK-122X	CAPACITOR,505U	0.0012µF,50V
C7107	NCB31EK-103X	CAPACITOR,505U	0.01µF,25V
C7108	NCF21CZ-105X	CAPACITOR,505U	1µF,16V
C7109	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7110	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7111	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7112	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7113	NCB31HK-102X	CAPACITOR,505U	0.001µF,50V
C7114	NCB31EK-103X	CAPACITOR,505U	0.01µF,25V
C7115	NCB31CK-104X	CAPACITOR,505U	0.1µF,16V
C7116	NCB31EK-103X	CAPACITOR,505U	0.01µF,25V
C7117	NCB31EK-103X	CAPACITOR,505U	0.01µF,25V
C7118	NBP41CM-106X	T CAPACITOR,505U	10µF,16V
C7119	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7120	NBE20JM-106X	T CAPACITOR,505U	10µF,6.3V
C7121	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7122	NCF31CZ-104X	CAPACITOR,505U	0.1µF,16V
C7123	NBE20JM-106X	T CAPACITOR,505U	10µF,6.3V
C7601	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7602	NBE40JM-476X	T CAPACITOR	47µF,6.3V
C7603	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C7604	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7605	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7606	NCB11CK-225X	CAPACITOR	2.2µF,16V
C7607	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C7608	NCB11CK-225X	CAPACITOR	2.2µF,16V
C7609	NCB11CK-225X	CAPACITOR	2.2µF,16V
C7610	NBP41CM-226X	T CAPACITOR	22µF,16V
C7614	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C7615	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C7618	NCB31HK-822X	CAPACITOR	0.0082µF,50V
C7619	NBE20JM-225X	T CAPACITOR	2.2µF,6.3V
C7620	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C7621	NDC31HJ-151X	CAPACITOR	150pF,50V
C7623	NDC31HJ-471X	CAPACITOR	470pF,50V
C7625	NCB21AK-105X	CAPACITOR	1µF,10V
C7627	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7628	NCB11CK-225X	CAPACITOR	2.2µF,16V
C7629	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C7630	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7631	NCF31AZ-105X	CAPACITOR	1µF,10V
C7632	NCF31AZ-105X	CAPACITOR	1µF,10V
C7636	NCB31HK-102X	CAPACITOR	0.001µF,50V
C7637	NCB31HK-102X	CAPACITOR	0.001µF,50V
C7638	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C7639	NCF31CZ-104X	CAPACITOR,805U	0.1µF,16V
C7640	NBE21AM-106X	T CAPACITOR	10µF,10V
C7641	NBE21AM-106X	T CAPACITOR	10µF,10V
C7642	NBE21AM-106X	T CAPACITOR	10µF,10V
C7646	NBE21AM-335X	T CAPACITOR	3.3µF,10V
C7647	NBP21DM-335X	T CAPACITOR	3.3µF,20V
C7648	NCF31CZ-104X	CAPACITOR,805U	0.1µF,16V
C7649	NCF31CZ-104X	CAPACITOR,805U	0.1µF,16V
C7650	NBP41EM-475X	T CAPACITOR	4.7µF,25V
C7654	NBP41EM-475X	T CAPACITOR	4.7µF,25V
C7655	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7656	NCF31AZ-105X	CAPACITOR	1µF,10V
C7660	NCB31EK-103X	CAPACITOR,805U	0.01µF,25V
C7661	NCB31EK-103X	CAPACITOR,805U	0.01µF,25V
C7665	NCB21CK-105X	CAPACITOR,805U	1µF,16V
C7666	NBE21AM-106X	T CAPACITOR,805U	10µF,10V
C7667	NDC31HJ-180X	CAPACITOR	18pF,50V
L7101	NQL315K-100X	COIL,505U	10µH
L7102	NQL315K-100X	COIL,505U	10µH
L7103	NQL315K-100X	COIL,505U	10µH

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L7603	NQL314K-220X	COIL	22µH
L7604	NQL315K-100X	COIL	10µH
L7605	NQL315K-100X	COIL	10µH
L7608	NQL315K-100X	COIL	10µH
L7610	NQL315K-100X	COIL	10µH
SW1	NSW0092-001X	SLIDE SWITCH	
SW2	NSW0008-001X	TACT SWITCH	
SW3	NSW0008-001X	TACT SWITCH	
SW4	NSW0008-001X	TACT SWITCH	
SW5	NSW0008-001X	TACT SWITCH	
SW6	NSW0099-001X	SLIDE SWITCH	
SW7601	NSW0105-001X	DETECT SWITCH	
CN7601	QGF0506F2-32X	FPC CONNECTOR	
CN7602	QGF0503C1-20X	FFC/FPC CONNECTOR,505U	
CN7603	QGF0503C1-20X	FFC/FPC CONNECTOR,805U	
CN7604	QGF0305F1-33X	FPC CONNECTOR	
CN7605	QGA1201F2-02X	CONNECTOR	
OT1	LY30029-051A	SPACER(A)	

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LCD BL BOARD ASSEMBLY <03>

PW2	YB10280A2-01	LCD BL BOARD ASSY,505U	
	YB10280B2-01	LCD BL BOARD ASSY,805U	
IC751	MIP805	IC	
Q7501	2SC3647/ST/-X	POW TRANSISTOR	
Q7502	2SC3647/ST/-X	POW TRANSISTOR	
Q7503	DTA144EE	TRANSISTOR	
Q7504	2SC4617/QR/-X	TRANSISTOR	
Q7505	2SC4617/QR/-X	TRANSISTOR	
Q7506	2SC4617/QR/-X	TRANSISTOR	
D751	1SS376	DIODE	
R751	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R7501	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7502	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7503	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7504	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7505	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7506	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R7507	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R7508	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7509	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7510	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
C751	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C752	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C753	NCB31HK-222X	CAPACITOR	0.0022µF,50V
C754	NCB31HK-222X	CAPACITOR	0.0022µF,50V
C7501	NCZ1016-150X	CAPACITOR,505U	15pF,2kV
	NCZ1016-180X	CAPACITOR,805U	18pF,2kV
C7502	NCZ1016-180X	CAPACITOR	18pF,2kV
C7503	NFV41HJ-273X	MPPS CAPACITOR	0.027µF,50V
C7504	NCB31EK-103X	CAPACITOR	0.01µF,25V
C7505	NBE40JM-226X	T CAPACITOR	22µF,6.3V
C7506	NCB31EK-103X	CAPACITOR	0.01µF,25V
C7507	NDC31HJ-151X	CAPACITOR	150pF,50V
C7508	NCB11CK-105X	CAPACITOR	1µF,16V
C7509	NCB31CK-104X	CAPACITOR	0.1µF,16V
C7510	NCB31HK-562X	CAPACITOR	0.0056µF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L751	NQLZ011-681X	COIL	680µH
L752	NQL315K-100X	COIL	10µH
L7501	NQLZ010-680X	COIL	68µH
L7502	NQLZ010-220X	COIL	22µH
T7501	NQS0037-001X	SW TRANSF	
CN7501	QGF0506F2-32X	FPC CONNECTOR	
CN7502	QGF0505F1-24X	FPC CONNECTOR	
CN7503	QGA5002F1-02X	CONNECTOR	
CN7504	QGF0505F2-06X	FPC CONNECTOR	
⚠ F751	NMFZ006-R20X-K	FUSE	T0.2A
OT1	LY41726-001A	PLATE(EARTH)	

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CCD BOARD ASSEMBLY <04>

PW	YB20876A-01	CCD BOARD ASSY	
Q5001	2SC3931/CD/-X	TRANSISTOR	
R5001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R5002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R5003	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
R5004	NRS181J-0R0X	MG RESISTOR	0Ω,1/8W
C5001	NCB21CK-104X	CAPACITOR	0.1µF,16V
C5002	NBP41DM-106X	T CAPACITOR	10µF,20V
C5003	NCB21CK-104X	CAPACITOR	0.1µF,16V
C5004	NBE21AM-106X	T CAPACITOR	10µF,10V
C5005	NCB11EK-104X	CAPACITOR	0.1µF,25V
C5006	NCB21CK-104X	CAPACITOR	0.1µF,16V
C5007	NCB21HK-222X	CAPACITOR	0.0022µF,50V
C5011	NCB21CK-105X	CAPACITOR	1µF,16V
L5001	NQL315K-100X	COIL	10µH

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JUNCTION BOARD ASSEMBLY <05>

PW2	YB10278A2-01	JUNCTION BOARD ASSY
SW571	NSW0095-001X	DETECT SWITCH
CN571	QGF0506F3-33X	FFC/FPC CONNECTOR
CN572	QGF0507F1-15X	FPC CONNECTOR
CN573	QGF0505F2-11X	FPC CONNECTOR
CN574	QGF0505F2-06X	FPC CONNECTOR

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JACK BOARD ASSEMBLY <06>

PW1	YB10278A1-01	JACK BOARD ASSY
IC501	BA10358F-XE	IC
IC502	PIC-26043T2	IR DETECT UNIT
Q501	DTC143XE	TRANSISTOR
Q502	RPM-22PB	PHOTO TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
D501	TLSU1002/LM/-X	LE DIODE	
D502	MA8068	ZENER DIODE	
D504	MA8068	ZENER DIODE	
D505	MA8068	ZENER DIODE	
R501	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R502	NRSA63J-684X	MG RESISTOR	680kΩ,1/16W
R503	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R504	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R505	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R506	NRSA63J-824X	MG RESISTOR	820kΩ,1/16W
R507	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R508	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R509	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
R510	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R511	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W
R512	NRSA63J-391X	MG RESISTOR	390Ω,1/16W
R513	NRSA63J-470X	MG RESISTOR	47Ω,1/16W
R515	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R516	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R517	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R518	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R519	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R520	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R521	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C501	NBE21AM-335X	T CAPACITOR	3.3µF,10V
C502	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C503	NCB31EK-153X	CAPACITOR	0.015µF,25V
C504	NCB31EK-153X	CAPACITOR	0.015µF,25V
C506	NBE21AM-106X	T CAPACITOR	10µF,10V
C508	NBE20JM-226X	T CAPACITOR	22µF,6.3V
C511	NCB31HK-103X	CAPACITOR	0.01µF,50V
C512	NCB31HK-103X	CAPACITOR	0.01µF,50V
L501	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L502	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
L503	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
J501	QNS0078-001	3.5 JACK	
J502	NNZ0028-001	D CONNECTOR	
J503	PEMC1032	MINI DIN CONNCTOR	
CN501	QGF0507F1-22X	FPC CONNECTOR	

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REAR BOARD ASSEMBLY <07>

PW3	YB10278A3-01	REAR BOARD ASSY	
D551	MA8068	ZENER DIODE	
D552	MA8068	ZENER DIODE	
D553	MA8068	ZENER DIODE	
D554	MA8068	ZENER DIODE	
D555	MA8068	ZENER DIODE	
D556	MA8068	ZENER DIODE	
D557	MA8068	ZENER DIODE	
R551	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R552	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R553	NQR0129-002X	FERRITE BEAD	
R554	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R555	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R556	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
J551	LY31577-001A	BATT.TERM.UNIT
J552	QNS0152-001	2.5 JACK
J553	PEMC1203	MINI JACK
⚠ J554	QAB0028-001	LI BATTERY
CN551	QGA1201C1-11	CONNECTOR

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B/W VF BOARD ASSEMBLY(DVL505U) <08>

PW3	YB10280A3-01	B/W VF BOARD ASSY	
Q7201	2SD2216J/QR/-X	TRANSISTOR	
D7201	MA111	DIODE	
R7201	NRVA63D-153X	CMF RESISTOR	15kΩ,1/16W
R7202	NRVA63D-103X	CMF RESISTOR	10kΩ,1/16W
R7203	NRVA63D-680X	CMF RESISTOR	68Ω,1/16W
R7204	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
C7201	NCB31EK-103X	CAPACITOR	0.01µF,25V
CN7201	QGF0503C1-20X	FFC/FPC CONNECTOR	
CN7202	QGF0503C1-20X	FFC/FPC CONNECTOR	
CN7203	QGA1201C2-02X	CONNECTOR	

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DSC BOARD ASSEMBLY <10>

PW	YB20879A-02	DSC BOARD ASSY	
IC8001	JCY0076B	IC	
IC8002	M32000D3FP	IC	
IC8003	TC58FVT16FT0/6A	IC(MICRO C ROM)	
IC8004	S-814A31AMC-W	IC	
IC8007	TC7WHU04FU	IC	
	or SN74AHC2GU04T	IC	
IC8008	TC7W08FU	IC(DIGITAL)	
IC8009	TC7W08FU	IC(DIGITAL)	
Q8001	2SB1121/TU/-X	TRANSISTOR	
Q8002	2SC4081/QR/-X	TRANSISTOR	
R8001	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R8002	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R8003	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R8004	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R8005	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R8006	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R8007	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R8013	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R8014	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8015	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8016	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8017	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8018	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8019	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8020	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8021	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8022	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8023	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8024	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
R8025	NRSA63J-560X	MG RESISTOR	56Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R8026	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R8027	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
R8030	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R8031	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R8032	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R8033	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
R8034	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R8035	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
C8001	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8002	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C8003	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8005	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8006	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8007	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8008	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8009	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8010	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8011	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8012	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8013	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8014	NBE50JM-107X	T CAPACITOR	100µF,6.3V
C8015	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8016	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8017	NCB31HK-102X	CAPACITOR	0.001µF,50V
C8018	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8019	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8020	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8021	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8022	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8023	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8024	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8025	NBE50JM-107X	T CAPACITOR	100µF,6.3V
C8026	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8030	NDC31HJ-150X	CAPACITOR	15pF,50V
C8039	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8040	NDC31HJ-270X	CAPACITOR	27pF,50V
C8041	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C8042	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C8043	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C8044	NBE20JM-106X	T CAPACITOR	10µF,6.3V
C8045	NBE40JM-106X	T CAPACITOR	10µF,6.3V
C8046	NBE41AM-106X	T CAPACITOR	10µF,10V
C8047	NCB31CK-104X	CAPACITOR	0.1µF,16V
C8048	NCB31EK-103X	CAPACITOR	0.01µF,25V
L8001	NQL024J-100X	COIL	10µH
L8002	NQL034K-150X	COIL	15µH
L8003	NQL024J-100X	COIL	10µH
X8001	NAX0354-001X	RESONATOR	
CN801	QGB0509L3-30X	CONNECTOR	

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION